

09/510937

FILE 'REGISTRY' ENTERED AT 14:52:28 ON 09 JUN 2000
E POLYTETRAFLUOROETHYLENE/CN

L1 1 S E3

FILE 'CAPLUS' ENTERED AT 14:52:49 ON 09 JUN 2000

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON POLYTETRAFLUOROETHYLENE
/CN

L2 35980 SEA FILE=CAPLUS ABB=ON PLU=ON L1 OR PTFE OR POLYTETRAFL
UOROETHYLENE OR POLY(W) (TETRAFLUOROETHYLENE OR TETRA(W) (F
LUOROETHYLENE OR FLUORO ETHYLENE) OR TETRAFLUORO
ETHYLENE) OR POLYTETRA(W) (FLUOROETHYLENE OR FLUORO
ETHYLENE) OR POLYTETRAFLUORO ETHYLENE

L21 4109 SEA FILE=CAPLUS ABB=ON PLU=ON L2 AND (POROUS? OR
POROSITY)

L22 353 SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND (CATHETER OR
TUBE OR TUBING OR TUBULAR OR BALLOON OR PIPE OR PIPING)

L23 16 SEA FILE=CAPLUS ABB=ON PLU=ON L22 AND FIBRIL

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON POLYTETRAFLUOROETHYLENE
/CN

L2 35980 SEA FILE=CAPLUS ABB=ON PLU=ON L1 OR PTFE OR POLYTETRAFL
UOROETHYLENE OR POLY(W) (TETRAFLUOROETHYLENE OR TETRA(W) (F
LUOROETHYLENE OR FLUORO ETHYLENE) OR TETRAFLUORO
ETHYLENE) OR POLYTETRA(W) (FLUOROETHYLENE OR FLUORO
ETHYLENE) OR POLYTETRAFLUORO ETHYLENE

L21 4109 SEA FILE=CAPLUS ABB=ON PLU=ON L2 AND (POROUS? OR
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L22 353 SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND (CATHETER OR
TUBE OR TUBING OR TUBULAR OR BALLOON OR PIPE OR PIPING)

L24 4 SEA FILE=CAPLUS ABB=ON PLU=ON L22 AND THIN WALL?

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON POLYTETRAFLUOROETHYLENE
/CN

L2 35980 SEA FILE=CAPLUS ABB=ON PLU=ON L1 OR PTFE OR POLYTETRAFL
UOROETHYLENE OR POLY(W) (TETRAFLUOROETHYLENE OR TETRA(W) (F
LUOROETHYLENE OR FLUORO ETHYLENE) OR TETRAFLUORO
ETHYLENE) OR POLYTETRA(W) (FLUOROETHYLENE OR FLUORO
ETHYLENE) OR POLYTETRAFLUORO ETHYLENE

L21 4109 SEA FILE=CAPLUS ABB=ON PLU=ON L2 AND (POROUS? OR
POROSITY)

L22 353 SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND (CATHETER OR
TUBE OR TUBING OR TUBULAR OR BALLOON OR PIPE OR PIPING)

L25 24 SEA FILE=CAPLUS ABB=ON PLU=ON L22 AND (THICK? (S) (MM OR
MILLIMET? OR MILLI (W) (METER OR METR?)))

L26 6 SEA FILE=CAPLUS ABB=ON PLU=ON L25 AND LAYER?

L27 21 L23 OR L24 OR L26

=> d 1-21 .bevstr

L27 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 2000:123173 CAPLUS

DOCUMENT NUMBER: 132:153082

TITLE: **Thin-wall****polytetrafluoroethylene tube**INVENTOR(S): Campbell, Carey V.; Goffena, Donald G. M.;
Lewis, James D.; Myers, David J.; Sparling,
Clayton M.

PATENT ASSIGNEE(S): W. L. Gore & Associates, Inc., USA

SOURCE: U.S., 21 pp., Cont.-in-part of U.S. Ser. No.
204,708.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6027779	A	20000222	US 1994-247960	19940524
US 6025044	A	20000215	US 1994-204708	19940302
JP 09501759	T2	19970218	JP 1994-507204	19940818
PRIORITY APPLN. INFO.:			US 1993-108963 ✓	19930818
			US 1994-204708 ✓	19940302
			US 1994-247960 ✓	19940524
			WO 1994-US9449	19940818

AB A thin-wall PTFE (polytetrafluoroethylene) tube in the form of a tube of porous expanded PTFE film wherein the porous PTFE film has a microstructure contg. a multiplicity of fibrils oriented substantially parallel to each other. The tube has a wall thickness of less than about 0.25 mm and is made from at least one first layer and at least one second layer of porous PTFE film, wherein the fibrils of the first and second layers are oriented substantially perpendicular to each other. Preferably the fibrils of the at least one first layer are oriented substantially parallel to the longitudinal axis of the tube and the fibrils of the at least one second layer of porous PTFE film are oriented substantially circumferential to the tube. The first and second layers may be inner and outer layers resp., or alternatively their relationship may be reversed. Alternatively, either of the first and second film layers

Searcher : Shears 308-4994

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may be replaced with alternative reinforcing components such as a braid or at least one reinforcing rib. The reinforcing rib is preferably in the form of a helically-wrapped metal wire located between the first and second layers.

IT 9002-84-0, **Polytetrafluoroethylene**

RL: DEV (Device component use); USES (Uses)

(expanded; **thin-wall**

polytetrafluoroethylene tube)

REFERENCE COUNT: 68

REFERENCE(S): (5) Anon; JP 60172306 1985 CAPLUS
(17) Balko, A; J of Surg Research 1986, V40, P305 MEDLINE
(22) Chuter, T; J of Vas Surg 1993, V18(2), P185 MEDLINE
(24) Cragg, A; Radiology 1993, V187(3), P643 MEDLINE
(34) Kato; US 4478898 1984 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 2000:113022 CAPLUS

DOCUMENT NUMBER: 132:138616

TITLE: **Thin-wall**

polytetrafluoroethylene tube

INVENTOR(S): Campbell, Carey V.; Lewis, James D.; Myers, David J.

PATENT ASSIGNEE(S): W. L. Gore & Associates, Inc., USA

SOURCE: U.S., 18 pp., Cont.-in-part of U.S. Ser. No. 108,963.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6025044	A	20000215	US 1994-204708	19940302
US 6027779	A	20000222	US 1994-247960	19940524
JP 09501759	T2	19970218	JP 1994-507204	19940818
US 6027811	A	20000222	US 1995-486124	19950607
PRIORITY APPLN. INFO.:			US 1993-108963	19930818
			US 1994-204708	19940302
			US 1994-247960	19940524
			WO 1994-US9449	19940818

AB In a **thin-wall PTFE tube** in the form of a **tube** of **porous** expanded **PTFE** film, the **porous PTFE** film has a microstructure contg. a multiplicity of **fibrils** oriented

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substantially parallel to each other. The **tube** has a wall **thickness** of less than about 0.25 mm and is made from at least one first **layer** and at least one second **layer** of **porous PTFE** film, wherein the **fibrils** of the first and second **layers** are oriented substantially perpendicular to each other. Preferably the **fibrils** of the at least one first **layer** are oriented substantially parallel to the longitudinal axis of the **tube** and the **fibrils** of the at least one second **layer** of **porous PTFE** film are oriented substantially circumferential to the **tube**. The first and second **layers** may be inner and outer **layers** resp., or alternatively their relationship may be reversed. Alternatively, either of the first and second film **layers** may be replaced with alternative reinforcing components such as a braid or at least one reinforcing rib.

IT 9002-84-0, **Polytetrafluoroethylene**

RL: TEM (Technical or engineered material use); USES (Uses)

(**porous** expanded film; **thin-wall**

polytetrafluoroethylene tube)

REFERENCE COUNT: 70

REFERENCE(S): (5) Anon; JP 60172306 1985 CAPLUS
(18) Balko, A; J of Surg Research 1986, V40, P305 MEDLINE
(25) Cragg, A; Percutaneous Femoropopliteal Graft Placement Radiology 1993, V187(3), P643 MEDLINE
(29) George, P; Lancet 1990, V335, P582 MEDLINE
(34) Kato; US 4478898 1984 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1999:495445 CAPLUS

DOCUMENT NUMBER: 131:131036

TITLE: Expanded **PTFE**-containing flocked articles

INVENTOR(S): Norvell, Jean; Wagner, Philip L.

PATENT ASSIGNEE(S): Gore Enterprise Holdings, Inc., USA

SOURCE: PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9939038	A1	19990805	WO 1998-US27038	19981218
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,				
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DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP,
KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,
TT, UA, UG, UZ, VN, YU, ZW

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
NL, PT, SE

AU 9918325 A1 19990816 AU 1999-18325 19981218
PRIORITY APPLN. INFO.: US 1998-15616 19980129
 WO 1998-US27038 19981218

AB Flocked articles are disclosed which include as at least one component of the article a water resistant, wind resistant, breathable portion. The water resistant, wind resistant, breathable portion may be a membrane, layered structure or composite which is either porous or nonporous, which can also be air permeable or air impermeable, hydrophilic, hydrophobic and/or oleophobic. In a particularly preferred embodiment of the present invention, at least a portion of the article comprises an expanded PTFE [i.e., microporous structure of microscopic polymer fibrils interconnecting polymer nodes (particles) from which the fibrils emerge]. The flocked surface of the articles has abrasion-to-leakage value of .gtoreq.50 wear cycles. The flocked article may have any desired shape, such as a flexible sheet, a fabric, a fiber, a flexible or rigid three-dimensional shape, a tube, or the like. Moreover the configuration of the article may be either simple or complex, ranging from a single sheet to a layered structure to a multilayered, multicompositional form. A typical article comprised an expanded PTFE membrane, coated with a pressure-sensitive adhesive, and flocked with nylon flocking.

IT 9002-84-0

RL: TEM (Technical or engineered material use); USES (Uses)
(water-resistant, breathable, wind-resistant expanded
PTFE-contg. flocked articles)

REFERENCE COUNT: 6

REFERENCE(S) : (1) Endrenyi, F; US 3616136 A 1971 CAPLUS
 (2) Gore & Ass; EP 0288214 A 1988
 (3) Gore & Ass; WO 9734507 A 1997
 (4) Kanebo Ltd; JP 63028984 A 1988
 (5) Malden Mills Ind Inc; EP 0445394 A 1991
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:685158 CAPLUS

DOCUMENT NUMBER: 129:331854

TITLE: Dust-free and chemical-resistant ring-shaped
 seals and their manufacture from monoaxially
 oriented porous PTFE

INVENTOR(S) : Kuno, Hirokazu; Miura, Masyuki

PATENT ASSIGNEE(S) : Japan Gore Tex Inc., Japan

 Searcher : Shears 308-4994

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SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	JP 10281291	A2	19981023	JP 1997-83017	19970401
AB	Title seals show a fibril orientation in the thickness direction and are manufd. (a) by inserting cores into monoaxially oriented porous PTFE (A)-made tubes , cutting the tube at regular intervals, and removal of the cores, (b) by improving rigidity of A tubes and cutting the tube at regular intervals, or (c) by cutting A-made rods into sheets at regular intervals and punching the sheets. Thus, 85 parts PTFE was blended with 15 parts solvent naphtha, extrusion molded, heated to remove the naphtha, drawn in the lengthwise direction of the cylinder and hot fixed to give a tube , which was wound with craft tape, sliced, and sepd. from the tapes to give a ring-type seal showing good sealability and dimension stability under high pressure.				
IT	9002-84-0, Polytetrafluoroethylene RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (manuf. of dust-free ring seals from monoaxially oriented porous PTFE)				

L27 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:402453 CAPLUS
DOCUMENT NUMBER: 127:35630
TITLE: Flexible **tubes** having **porous polytetrafluoroethylene layers** and their manufacture
INVENTOR(S): Oga, Takahiro
PATENT ASSIGNEE(S): Japan Gore Tex Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 PP.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	JP 09123302	A2	19970513	JP 1995-306738	19951031
AB	Title tubes have structures obtained by laminating porous polytetrafluoroethylene (PTFE) Searcher : Shears 308-4994				

layers on the outside surfaces of thermoplastic resin **tubes**, which are obtained by melt-extruding thermoplastic resins and have thickness .ltoreq.100 .mu.m. The **tubes** are manufd. by putting core materials into inside of the **tubes**, laminating the **PTFE layers** on the outside surfaces of the **tubes**, and pulling out the core materials from the **tubes**. Thus, hexafluoropropylene-tetrafluoroethylene copolymer was extruded with putting Ag-plated soft Cu wire into the **tube**, laminated with unbaked biaxially oriented **porous PTFE** film (showing **thickness** 25 .mu.m, **porosity** 80%, and pore diam. 0.2 .mu.m), adhered by heating, and the wire was pulled out to give a **tube** showing water resistance 25 kg/cm² and bending property (max. diam. up to generate kink) 3.6 mm.

IT 9002-84-0, **Polytetrafluoroethylene**

RL: PRP (Properties); TEM (Technical or engineered material use);

USES (Uses)

(flexible thermoplastic **tubes** having **porous polytetrafluoroethylene layers**)

L27 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1996:345388 CAPLUS

DOCUMENT NUMBER: 125:12937

TITLE: Flexible kinking-resistant multilayer plastic **tubes** with improved resistance to heat and chemicals and soiling

INVENTOR(S): Shinmen, Hiroshi; Ishii, Junji; Arai, Keiichi; Nakajima, Toshuki

PATENT ASSIGNEE(S): Japan Gore Tex Inc, Japan; Olympus Optical Co

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08072178	A2	19960319	JP 1994-232124	19940901

AB The **tubes** consist of a solid inner **layer** comprising **PTFE**, a **porous middle layer** comprising **PTFE**, and an air-permeable **layer** comprising polymers (e.g., natural or synthetic rubber) having elasticity greater than that of the middle **layer** and exhibiting Gurley air permeation no. .ltoreq.100,000 s, and an outer **layer** comprising **porous PTFE** and optionally contain a thermoplastic adhesive **layer**. **PTFE** film was wound around a **pipe**, covered with **porous PTFE** film by winding the film around the

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pipe, heat treated 10 min at 360.degree., coated with fluoro rubber to coating **thickness** 30 .mu.m, dried, and covered with **porous PTFE** film to give a multilayer **tube** with Gurley no. 8000-10,000 s and radius of curvature 10 mm and good resistance to kinking, soiling, and oily magic inks.

IT 9002-84-0, PTFE

RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)

(laminates with fluoropolymers; for flexible kinking-resistant multilayer plastic **tubes** with improved resistance to heat and chems. and soiling)

L27 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1995:490085 CAPLUS

DOCUMENT NUMBER: 122:222958

TITLE: A **thin-wall**, seamless,
porous polytetrafluoroethylene
medical **tube**

INVENTOR(S): House, Wayne D.; Moll, Kenneth W.; Zukowski,
Stanislaw L.

PATENT ASSIGNEE(S): W. L. gore and Associates, Inc., USA

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9505277	A1	19950223	WO 1994-US4917	19940504
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2167943	AA	19950223	CA 1994-2167943	19940504
AU 9469437	A1	19950314	AU 1994-69437	19940504
EP 714345	A1	19960605	EP 1994-917911	19940504
R: DE, FR, GB, IT, SE				
JP 09501585	T2	19970218	JP 1994-506928	19940504
PRIORITY APPLN. INFO.:				
			US 1993-108960	19930818
			WO 1994-US4917	19940504

AB A seamless **tube** of **porous polytetrafluoroethylene** having a microstructure of nodes interconnected by **fibrils** and having a wall thickness of less than about 0.20 mm is claimed. The **tube** would be useful in certain vascular graft applications wherein the

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tube may serve as a replacement for segments of blood vessels. GORE-TEX surgical membrane was used in prepn. of **thin-wall** medical **tubes**.

IT 9002-84-0, **Ptfe**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**thin-wall**, seamless, **porous**
polytetrafluoroethylene medical **tubes**)

L27 ANSWER 8 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1994:559143 CAPLUS

DOCUMENT NUMBER: 121:159143

TITLE: Rapidly recoverable
polytetrafluoroethylene and process
therefore

INVENTOR(S): House, Wayne D.; Myers, David J.

PATENT ASSIGNEE(S): W. L. Gore and Associates, Inc., USA

SOURCE: U.S., 12 pp. Cont.-in-part of U.S. 4,877,661.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5308664	A	19940503	US 1988-248887	19880923
US 4877661	A	19891031	US 1987-110145	19871019
AU 8822922	A1	19890420	AU 1988-22922	19880929
AU 626149	B2	19920723		
EP 313263	A2	19890426	EP 1988-309542	19881012
EP 313263	A3	19891018		
EP 313263	B1	19930324		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
GB 2211190	A1	19890628	GB 1988-23934	19881012
AT 87259	E	19930415	AT 1988-309542	19881012
NO 8804629	A	19890420	NO 1988-4629	19881018
JP 02000645	A2	19900105	JP 1988-260731	19881018
JP 2547243	B2	19961023		
CA 1318093	A1	19930525	CA 1988-580425	19881018
DK 8805817	A	19890420	DK 1988-5817	19881019
FI 8804830	A	19890420	FI 1988-4830	19881019

PRIORITY APPLN. INFO.:

US 1987-110145 19871019
US 1988-248887 19880923
EP 1988-309542 19881012

AB The microstructure of the **porous PTFE** material consists of nodes interconnected by **fibrils**, substantially all of the **fibrils** having a bent or wavy appearance and are suitable for use in the medical field, filtration, and fabric applications, etc. (no data). Thus, a blend of 1 lb powd.

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PTFE and 150 cm³ Isopar M was extruded, dried 30 min at 250.degree. in a forced convection air oven, expanded 2.3:1, and heat treated 90 s at 393.degree. to give a 10-mm-diam. **tube** having rapid recovery 22.3%.

IT **9002-84-0P, PTFE**

(**tubes**, prepn. of, **porous**, rapidly recoverable)

L27 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1994:411233 CAPLUS

DOCUMENT NUMBER: 121:11233

TITLE: **Porous polytetrafluoroethylene**
material and process for producing the same
INVENTOR(S): Yamamoto, Katsutoshi; Tanaka, Osamu; Onogi, Hirofumi

PATENT ASSIGNEE(S): Daikin Industries Ltd., Japan

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9403531	A1	19940217	WO 1993-JP1051	19930727
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 613921	A1	19940907	EP 1993-916228	19930727
EP 613921	B1	19991117		
R: DE, FR, GB				
US 5688836	A	19971118	US 1994-211056	19940325
PRIORITY APPLN. INFO.:				
			JP 1992-203552	19920730
			WO 1993-JP1051	19930727

AB A **porous PTFE**-based material, esp., useful for medical goods and having improved in bond-ability and free from the problem of the buckling resistance on bending and tearing in the axial direction of **tubes**, comprises a **fibril** part mainly comprising **PTFE** and a node part comprising a heat-meltable resin with a m.p. lower than that of **PTFE**. The process comprises subjecting powdery paste extrusion material comprising particles of **PTFE** emulsion and the heat-meltable resin to paste extrusion molding, optionally followed by rolling, to give an unsintered material, stretching the same at a temp. lower than the m.p. of the meltable resin, and heat setting the stretched material at a temp. above the m.p. of **PTFE**. Extruding a product from an emulsion mixt. of 1:1 **PTFE** (m.p. 345.degree.) and a tetrafluoroethylene-perfluoroalkylvinyl

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ether copolymer (m.p. 310.degree.) contg. 23 phr Isopar E and heating at 150.degree. to give a **tube**, which was stretched at 500%/s and at 300.degree. and heat set for 5 min at 350.degree. gave a samples showing **porosity** .apprx.85%.

IT **9002-84-0, PTFE**

(melttable resin emulsion blends, for **porous** and bondable medical **tubes**)

L27 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1993:497432 CAPLUS

DOCUMENT NUMBER: 119:97432

TITLE: Manufacture of perfluoroether-treated
porous polytetrafluoroethylene
products

INVENTOR(S): Chung, Hoo Young

PATENT ASSIGNEE(S): Donaldson Co., Inc., USA

SOURCE: PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9221715	A1	19921210	WO 1992-US3045	19920414
W: AU, BR, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2108278	AA	19921205	CA 1992-2108278	19920414
AU 9216667	A1	19930108	AU 1992-16667	19920414
AU 668087	B2	19960426		
EP 587588	A1	19940323	EP 1992-909581	19920414
EP 587588	B1	19980708		
R: DE, FR, GB, IT, SE				
BR 9205929	A	19940927	BR 1992-5929	19920414
JP 07501347	T2	19950209	JP 1992-508874	19920414
ZA 9203268	A	19931108	ZA 1992-3268	19920506
US 5869156	A	19990209	US 1997-852045	19970506
US 5972449	A	19991026	US 1999-246594	19990208

PRIORITY APPLN. INFO.:

US 1991-710501	19910604
WO 1992-US3045	19920414
US 1994-289172	19940810
US 1997-852045	19970506

AB The title products (films, **tubes**, etc.), useful as waterproof wettable fabrics, air or liq. filters, liq./liq. sepn. membranes, vascular grafts, mech. seals, etc., comprise a matrix of **PTFE** treated by a fluorinated org. polymer fluid, e.g., a poly(perfluoropropylene oxide). The microstructure of treated **PTFE** is characterized by nodes interconnected with

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fibrils. Thus, a blend of 6.7 kg Fluon CD 123 and a premix of 1.4 kg kerosene and 0.14 kg Fomblin Y 120 (a liq. perfluoroether) was pressed into plugs, ram-extruded into a sheet, calendered to a 3-mil film, stripped of kerosene, and transversely stretched .apprx.2000% at a temp. below the m.p. of **PTFE** to give the title product having filtration efficiency (DOP aerosol test) 99.9985.

IT **9002-84-0P, Polytetrafluoroethylene**
(porous, liq. perfluoroether-treated, manuf. of)

L27 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1993:410050 CAPLUS
DOCUMENT NUMBER: 119:10050
TITLE: Manufacture of surface-modified **porous**
expanded **polytetrafluoroethylene**
INVENTOR(S): Zukowski, Stanislaw L.
PATENT ASSIGNEE(S): Gore, W. L., and Associates, Inc., USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9222604	A1	19921223	WO 1992-US4812	19920608
W: CA, DE, GB, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2110499	AA	19921223	CA 1992-2110499	19920608
CA 2110499	C	19980623		
JP 07500122	T2	19950105	JP 1992-500960	19920608
EP 646151	A1	19950405	EP 1992-914071	19920608
EP 646151	B1	19971105		
R: DE, FR, GB, IT, SE				

PRIORITY APPLN. INFO.: US 1991-718324 19910614
WO 1992-US4812 19920608

AB Surface of **porous** expanded **PTFE** having a microstructure of nodes interconnected by **fibrils**, useful for implantable medical devices, fabrics, filters, etc., was hydrophobized by exposing to radio frequency (13.56 MHz) plasma discharge of a reactive etching gas (NF₃, O, etc.) to give a water droplet roll-off angle of <10.degree..

IT **9002-84-0, Polytetrafluoroethylene**
(porous, surface hydrophobization of, gas plasma discharge treatment for)

L27 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1991:44618 CAPLUS
Searcher : Shears 308-4994

09/510937

DOCUMENT NUMBER: 114:44618
TITLE: **Porous** fluoropolymer alloy and its
manufacture by extrusion, stretching, and
sintering
INVENTOR(S): Browne, Ronnie
PATENT ASSIGNEE(S): Memron, Inc., USA
SOURCE: U.S., 16 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 4973609	A	19901127	US 1988-272549	19881117
AB	The title alloy, useful as an ultrafiltration membrane and having an asym. microstructure comprising small nodes, short fibrils , and small pore size on 1 surface and large nodes, long fibrils , and large pore size on the other surface, is prepd. by forming a compressed extrusion billet from .gtoreq.2 fluoropolymers capable of being stretched after extrusion and having different stretch characteristics, extruding, stretching, and sintering. An extrusion billet prepd. from PTFE resins (50:50 CD123-T60 mixt.) was extruded to form a tube , stretched 400% at 400.degree.F, and sintered at 680.degree.F to give a porous product having wall thickness 0.022 in. and tensile strength 3636 psi.				
IT	9002-84-0P, PTFE RL: PREP (Preparation) (membranes, porous , asym., manuf. of, stretching in)				

L27 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1990:521487 CAPLUS
DOCUMENT NUMBER: 113:121487
TITLE: Microporous catalytic material and support
structure
INVENTOR(S): Manniso, Jame L.
PATENT ASSIGNEE(S): Gore, W. L., and Associates, Inc., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4916110	A	19900410	US 1988-265632	19881101
		Searcher	: Shears	308-4994

09/510937

CA 2000684 AA 19900501 CA 1989-2000684 19891013
WO 9005022 A1 19900517 WO 1989-US4723 19891020
W: AU, DK, JP, NO
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE
AU 8944843 A1 19900528 AU 1989-44843 19891020
EP 441825 A1 19910821 EP 1989-912054 19891020
R: DE, FR, GB, IT, SE
JP 04502878 T2 19920528 JP 1989-511311 19891020
PRIORITY APPLN. INFO.: US 1988-265632 19881101
WO 1989-US4723 19891020

AB A microporous catalytic material and support is prep'd. under a
reducing atm. by pyrolysis of an interiorly metal-plated
porous polymer to leave the residual microporous
tubular-configured metal sheaths of the nodes,
fibrils, or other surfaces within the interior of the
resulting hollow structure.

IT 9002-84-0, **Polytetrafluoroethylene**
RL: RCT (Reactant)
(in microporous catalyst prepn.)

L27 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1990:141878 CAPLUS
DOCUMENT NUMBER: 112:141878
TITLE: Filter cartridge having a tunable asymmetric
fluoropolymer alloy filter membrane
INVENTOR(S): Browne, Ronnie
PATENT ASSIGNEE(S): Memron, Inc., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4889626	A	19891226	US 1988-272738	19881117

AB The filter cartridge comprises a **tubular** self-supporting
asym. fluoropolymer membrane disposed between the input and output
tubes in a sealed cartridge assembly. The **tubular**
membrane is made from a blend of .gtoreq.2 fluoropolymer resins
(esp. **PTFE** resins) and has a microstructure comprised of
nodes interconnected by **fibrils** aligned in a direction,
suitable for selectively adjusting the asym. pore sizes throughout
the membrane by compressing the material. A guide plugs the end of
the inlet **tube** and provides a filter medium passage from
the inside of the inlet **tube** to the outside of the
tubular membrane. The outlet **tube** provides a
filter medium passage from the inside of the **tubular**

Searcher : Shears 308-4994

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membrane. Both input and output **tubes** can slide in the ends of the cartridge assembly for adjusting the axial length and therefore the **porosity** of the membrane.

IT 9002-84-0, **PTFE**

(membranes, filter cartridge contg., with adjustable **porosity**)

L27 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1989:441030 CAPLUS

DOCUMENT NUMBER: 111:41030

TITLE: **Porous poly(tetrafluoroethylene)** articles with rapid deformation recovery and their manufacture
House, Wayne D.; Myers, David J.
PATENT ASSIGNEE(S): Gore, W. L., and Associates, Inc., USA
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 313263	A2	19890426	EP 1988-309542	19881012
EP 313263	A3	19891018		
EP 313263	B1	19930324		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 4877661	A	19891031	US 1987-110145	19871019
US 5308664	A	19940503	US 1988-248887	19880923
AT 87259	E	19930415	AT 1988-309542	19881012
PRIORITY APPLN. INFO.:			US 1987-110145	19871019
			US 1988-248887	19880923
			EP 1988-309542	19881012

AB **Porous** shaped **PTFE** articles, which rapidly recover >5.5% after deformation, have microstructural nodes interconnected by bent **fibrils**. A **tube** was prepd. by compressing powd. **PTFE** contg. Isopar M (lubricant) and a solvent into billet, heating at 60.degree., extruding at redn. ratio .apprx.240:1, and drying to remove the lubricant at 250.degree. for 30 min. The **tube** was stretched in 8.4-fold at 290.degree. (having **fibril** length .apprx.10 .mu.m) and heat-treated for 90 s at 393.degree., having inner diam. 10 mm and exhibiting 1% max. tensile force 0.53 kg and recovery 22.3% after compressing 84% and heating for 3 min at 380.degree..

IT 9002-84-0P, **PTFE**

(microporous, with rapid recovery from deformation, bent **fibril**-interconected nodes in relation to)

Searcher : Shears 308-4994

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L27 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1988:571910 CAPLUS
DOCUMENT NUMBER: 109:171910
TITLE: Manufacture of **PTFE tubes**
for blood vessels
PATENT ASSIGNEE(S): Gore, W. L., and Associates, Inc., USA
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63139926	A2	19880611	JP 1987-198364	19870810
JP 07015022	B4	19950222		
GB 2197870	A1	19880602	GB 1987-25612	19871102
DK 8705900	A	19880514	DK 1987-5900	19871111
			US 1986-930411	19861113

PRIORITY APPLN. INFO.:

AB The title **tubes** are prep'd. by extruding **PTFE** and drawing to give **tubes** contg. nodes connected by fine **fibrils**. The inner nodes have angle 15-85.degree. in the longitudinal direction. A mixt. of 1 lb **PTFE** (Fluon CD123) and 121 mL Ethopa M (solvent) was extruded, drawn 5-fold at .apprx.300.degree. and 400%/s, and heated for .apprx.7 min at 390.degree. to give a **porous tube** having inner diam. 6.4 mm, wall thickness 0.73 mm, breakdown pressure 51.6 psi, Hoop strength 254.5 psi, **fibril** length 18 .mu.m, and matrix strength 11,661 psi.

IT **9002-84-0P; PTFE**

RL: PREP (Preparation)
(blood vessel manuf. from **porous** Fluon CD123)

L27 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1986:20380 CAPLUS
DOCUMENT NUMBER: 104:20380
TITLE: **Porous** tetrafluoroethylene polymer
films or **tubes**
INVENTOR(S): Kawahigashi, Nobuo; Masuda, Takeo; Umezaki, Yoshitaka
PATENT ASSIGNEE(S): Nippon Valqua Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

Searcher : Shears 308-4994

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60179236	A2	19850913	JP 1984-35764	19840227

AB The title products with spherical shapes and uniform sizes are prepd. by extruding and/or pressing an unsintered mixt. of tetrafluoroethylene polymer and a liq. lubricant to give a molding and chem.-etching the molding to remove surface layer. Thus, Aflon CD 1 [poly(tetrafluoroethylene)] powder (diam. 0.2 .mu.) contg. 24 phr solvent naphtha was extruded to form a string, roll-pressed to form an unsintered film (thickness 0.08 mm), heat-treated at 130.degree. to remove naphtha, chem.-etched by immersing into metallic Na in liq. ammonia, and washed with water to give a product with pore diam. 0.2 .mu. and porosity 31%.

IT 9002-84-0P
(films or tubes, porous, with spherical shapes and uniform sizes, manuf. of, chem.-etching in)

L27 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1982:36445 CAPLUS

DOCUMENT NUMBER: 96:36445

TITLE: Multiple reusable tubular PTFE casing and apparatus and process for using same in the production of caseless (skinless) parboil or raw sausages

INVENTOR(S): Becker, Heinz

PATENT ASSIGNEE(S): Ashland Food Technology Holdings S. A., Luxembourg

SOURCE: Brit. UK Pat. Appl., 14 pp.
CODEN: BAXXDU

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2066037	A	19810708	GB 1980-35778	19801107
US 4371554	A	19830201	US 1980-201155	19801027

PRIORITY APPLN. INFO.: CH 1979-10067 19791109

AB A multiple reusable tubular casing for prodn. of skinless sausages comprises a PTFE [9002-84-0] membrane having a microstructure of nodes connected by fibrils, 70-80% porosity to allow venting of steam and other gaseous fluids radially through the tube, and a texture to facilitate release of the processed sausage. A porous PTFE membrane for parboiled and raw sausages has thickness 0.0015-0.0035 in., wt./area 2.79-4.03 mg/cm2, d. 0.44-0.63 g/cm3,

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Gurley no. (time for 100 cm³ air to pass through 1 in.2 membrane at 4.88 in. head water) 28 s max., bubble point pressure 13 psig min. and 15.6-22 psig av. and water entry pressure 40 psig min.

IT 9002-84-0

(membranes, for reusable sausage casings)

L27 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1978:495022 CAPLUS

DOCUMENT NUMBER: 89:95022

TITLE: Prosthetic device

PATENT ASSIGNEE(S): Gore, W. L., and Associates, Inc., USA

SOURCE: Brit., 5 pp. Addn. to Brit. 1,355,373.

CODEN: BRXXAA

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1506432	A	19780405	GB 1975-11563	19750320
US 3902198	A	19750902	US 1974-457711	19740402
DE 2508570	A1	19751023	DE 1975-2508570	19750227
AU 7578622	A1	19760902	AU 1975-78622	19750227
FR 2265345	A1	19751024	FR 1975-9900	19750328
SE 7503734	A	19751003	SE 1975-3734	19750401
JP 50135894	A2	19751028	JP 1975-39297	19750402
JP 53039719	B4	19781023		

PRIORITY APPLN. INFO.: US 1974-457711 19740402

AB The vascular prostheses consisted of expanded porous PTFE [9002-84-0] tubing of wall thickness 20-62 mils, d. 0.22-0.34 g/cc, and a microstructure consisting of nodes interconnected by fibrils, the fibrils being not less than 5 .mu. long; the tubing had porosity 80-90% and matrix tensile strength >7300 psi in at least one direction. E.g., carotid artery grafts in sheep of expanded porous PTFE with fibril length <7 .mu. were patent and displayed absence of fibroblastic and capillary ingrowth, with no neointimal development over the internal surface of the graft.

IT 9002-84-0

RL: BIOL (Biological study)

(porous expanded tubing of, for blood vessel prosthesis)

L27 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1972:413242 CAPLUS

DOCUMENT NUMBER: 77:13242

TITLE: Metal-air cell

Searcher : Shears 308-4994

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INVENTOR(S): Uchida, Sumio; Kumano, Shigeo
PATENT ASSIGNEE(S): Hitachi Maxell Ltd.
SOURCE: Ger. Offen., 11 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2040346	A	19720217	DE 1970-2040346	19700813

AB The chem. changes in a metal-air cell are accompanied by phys. changes which generate internal pressures on the cathode and consequently shorten the life of the cell. In an improved cylindrical metal-air or metal-O cell, the **tubular** cathode consists of a **porous** hydrophobic **poly(tetrafluoroethylene)** membrane with an electrocatalytic layer of Ag particles in a **poly(tetrafluoroethylene)** binder in which a Ni mesh is embedded as support and conductor. The catalytic layer is covered with a hydrophilic parchment paper layer, and the space between the cathode and a **porous** Zn anode is filled with amalgamated Zn powder and an alk. electrolyte in the form of a gel or paste. Means are provided to make the anode, cathode, and electrolyte liq.-tight and to permit access of air or O to the cathode. The **thin-walled** cylindrical flexible rubber or vinyl polymer ventilation layer around the pressure deformable cathode is perforated and serves to resist the internal pressure on the cathode. The cathode and ventilation layer are enclosed in a rigid perforated casing.

IT **9002-84-0**
RL: PRP (Properties)
(binder, for catalytic silver particles, in metal-air battery)

L27 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1968:452780 CAPLUS
DOCUMENT NUMBER: 69:52780
TITLE: Use of compact **porous** poly(perfluoroethylene) resin in partition chromatography
AUTHOR(S): Preobrazhenskii, B. K.; Moskvina, L. N.; Kalyamin, A. V.; Lilova, O. M.; Usikov, B. S.
CORPORATE SOURCE: USSR
SOURCE: Radiokhimiya (1968), 10(3), 377-9
CODEN: RADKAU
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Milled Ftoroplast-4 [poly(tetrafluoroethylene)] was heated at 380 +- 10.degree. for 20-30 min. in layers .apprx.10
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mm. thick, milled again, the powder fractionated with respect to the particle diam., and the desired fraction heated at 380 +/- 10.degree. for 30 min. in layers 20-30 mm. The material can be used as org. stationary phase in column chromatog. and has properties comparable to those of porous Ftoroplast. Columns may be prepd. with const. working vol. and height equiv. to the theoretical plate, independent on the column diam. due to the absence of channel and wall effects. The most elastic porous material was prepd. by selecting particles 0.2-0.5 mm. in diam. prior to the 2nd heating. Tubular and tablet material for the chromatog. could be thus prepd.

IT 9002-84-0, uses and miscellaneous

RL: TEM (Technical or engineered material use); USES (Uses)
(cellular, foam or porous, gas chromatog. stationary phases from compacted)

FILE 'CAPLUS' ENTERED AT 15:34:39 ON 09 JUN 2000

L28 1 S L25 AND MULTILAYER?

L29 0 S L28 NOT L27

(FILE 'MEDLINE, BIOSIS, EMBASE, LIFESCI, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO' ENTERED AT 15:35:41 ON 09 JUN 2000)

L30 69 S L27

L31 1 S L28

L32 69 S L30 OR L31

L33 66 DUP REM L32 (3 DUPLICATES REMOVED)

L33 ANSWER 1 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 2000-205679 [18] WPIDS

DOC. NO. NON-CPI: N2000-153022

DOC. NO. CPI: C2000-063459

TITLE: Melt-processable polytetrafluoroethylene
for use in thermoplastic applications has a high
peak melting temperature and good mechanical
properties.

DERWENT CLASS: A14 A81 F01 G03 L03 X25

INVENTOR(S): BASTIAANSEN, C; SMITH, P; TERVOORT, T; VISJAGER, J

PATENT ASSIGNEE(S): (BAST-I) BASTIAANSEN C; (OMLI-N) OMLIDON
TECHNOLOGIES LLC; (SMIT-I) SMITH P; (TERV-I)
TERVOORT T; (VISJ-I) VISJAGER J

COUNTRY COUNT: 87

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
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WO 2000008071	A2	20000217	(200018)*	EN	34
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RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC
MW NL OA PT SD SE SL SZ UG ZW

Searcher : Shears 308-4994

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W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK EE
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000008071	A2	WO 1999-US17829	19990806

PRIORITY APPLN. INFO: US 1998-95583 19980806

AN 2000-205679 [18] WPIDS

AB WO 200008071 A UPAB: 20000412

NOVELTY - A melt-processable fluoropolymer (A) has a peak temperature of at least 320 deg. C and good mechanical properties.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) a composition having a continuous polymeric phase comprising compound (A);

(b) an article comprising compound (A);

(c) a composition comprising compound (B) which is a melt-processable tetrafluoroethylene polymer or a melt-processable blend of two or more tetrafluoroethylene polymers;

(d) a method for producing an article comprising the melt-processable composition of (c); and

(e) a process for connecting parts comprising adhering a part to at least one further part with the composition of (c).

USE - The polymer is used in thermoplastic applications. Generally, the polymer includes most or all applications that currently are covered by standard **polytetrafluoroethylene (PTFE)**, and many of its modified, melt-processable copolymers, thus applications are envisioned, among other industries, in the wire and cable industry, the printed-circuit board industry, the chemical processing industry, the semiconductor industry, the automotive industry, out-door products and coating industry, the food industry, the biomedical industry, and more generally in industries and uses where any combination of high release, anti-stick, high-temperature stability, high chemical resistance, flame resistance, anti-fouling, ultraviolet (UV) resistance, low friction, and low dielectric constant is required.

ADVANTAGE - The **PTFE** polymers are readily melt-processable while maintaining good/suitable mechanical properties or **PTFE** grades having a non-zero melt-flow index in a particular range. They also have a relatively low crystallinity that is beneficial for the toughness of the products fabricated and have superior physical-chemical properties.

Dwg.0/2

Searcher : Shears 308-4994

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L33 ANSWER 2 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-170807 [15] WPIDS
DOC. NO. NON-CPI: N2000-126998
DOC. NO. CPI: C2000-053018
TITLE: Biomolecular solder for tissue repair, particularly
of nerves, comprises a concentrated aqueous
solution of biomolecules e.g. proteins, that have
been denatured to reduce solubility then dried.
DERWENT CLASS: A96 B02 B04 D22 P34
INVENTOR(S): DAWES, J M; DEKKER, P; MAITZ, P; OWEN, E R; PIPER,
J A; TRICKETT, R I
PATENT ASSIGNEE(S): (MACQ-N) MACQUARIE RES LTD; (MICR-N) MICROSEARCH
FOUND AUSTRALIA
COUNTRY COUNT: 86
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9965536	A1	19991223	(200015)*	EN	68
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
AU 9944914	A	20000105	(200024)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9965536	A1	WO 1999-AU495	19990618
AU 9944914	A	AU 1999-44914	19990618

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9944914	A Based on	WO 9965536

PRIORITY APPLN. INFO: AU 1998-4214 19980618

AN 2000-170807 [15] WPIDS

AB WO 9965536 A UPAB: 20000323

NOVELTY - Biomolecular solder (A) is a solid composition of at least one biomolecule (I) mixed at high concentration with an aqueous solvent and treated to denature (I) and dry the solder. The denaturation of (I) reduces its solubility and alters its mechanical properties so that when moistened these properties are similar to

Searcher : Shears 308-4994

those of the tissue being repaired.

DETAILED DESCRIPTION - Biomolecular solder (A) comprises a solid composition containing at least one biomolecule (I) mixed at high concentration with an aqueous solvent and treated to at least partially denature (I) and partly dry the solder, where:

(1) the (partial) denaturation of (I) reduces its solubility and alters its mechanical properties so that when moistened these properties are similar to those of the tissue being repaired; and

(2) the (partially) denatured (I) has strong internal bonding and is substantially unaffected by water absorption.

INDEPENDENT CLAIMS are also included for the following:

- (a) kit of (partial) **tubes** and/or shapes formed from (A);
- (b) method for preparing (A);
- (c) solder **tubes** produced by extrusion of (A); and
- (d) solder containing (I) that has been treated to reduce its solubility.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - (A) are used for any type of tissue repair, e.g. of body **tubes**, organs, skin, and spinal cord. A particular application is repair of nerves, e.g. where (A) provides a guide for nerve regeneration, in combination with promoters of neuron growth, or where a **tube** of (A), sealed at one end, is used to cap nerves that can not be rejoined, e.g. in amputation stumps.

ADVANTAGE - When moist (A) is flexible and can be cut, manipulated etc. without fracturing, and since it does not dissolve significantly, can be handled for a long time before activating binding to tissues. Activation may be done through **layers** of tissue and activating light is applied only to areas covered with (A), minimizing injury to tissue. (A) provides joints that do not leak; function immediately after binding and are at least as strong and long-lasting as those produced by suturing. Joining tissues with (A) is quicker and less traumatic than suturing.

Dwg.0/10

L33 ANSWER 3 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 ACCESSION NUMBER: 1999-167179 [14] WPIDS
 DOC. NO. NON-CPI: N1999-121839
 DOC. NO. CPI: C1999-048778
 TITLE: Hollow prosthesis for implantation.
 DERWENT CLASS: A14 A96 D22 P32 P34
 INVENTOR(S): DJAKOV, V E; KRYZHANOVSKII, A V; PUGACHEV, A K;
 DIYAKOV, V E; GUSINSKY, A V; KRYZHANOVSKY, A V;
 LEBEDEV, L V; MIKHAILOV, I V
 PATENT ASSIGNEE(S): (EKOF-R) EKOFLOX RES PRODN COMPLEX; (EKOF-R)
 EKOFLOX SCI PRODN COMPLEX
 COUNTRY COUNT: 55
 PATENT INFORMATION:

Searcher : Shears 308-4994

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PATENT NO	KIND	DATE	WEEK	LA	PG

WO 9907307	A1	19990218	(199914)*	RU	27
RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE					
W: AM AT AU AZ BA BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE					
HU IL JP KG KP KR KZ LT LV MD MX PL PT SE SG SK TJ TM TR UA					
US UZ VN YU					
AU 9888929	A	19990301	(199928)		
RU 2128024	C1	19990327	(200024)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

WO 9907307	A1	WO 1998-RU260	19980807
AU 9888929	A	AU 1998-88929	19980807
RU 2128024	C1	RU 1997-112837	19970807

FILING DETAILS:

PATENT NO	KIND	PATENT NO

AU 9888929	A Based on	WO 9907307

PRIORITY APPLN. INFO: RU 1997-112837 19970807

AN 1999-167179 [14] WPIDS

AB WO 9907307 A UPAB: 19990412

NOVELTY - Prosthesis is made of polymeric material and comprises two interconnected and interpenetrating matrices.

DETAILED DESCRIPTION - Hollow prosthesis is made of polymeric material, and has structure comprising two matrices, with one matrix made in shape of nodes connected by **fibrils** and other matrix defining hollow spaces, both creating together three dimensional network, in which the number of nodes, **fibrils** and hollow space defining elements per volume unit is not constant. The body of prosthesis is made of at least one **layer** preferably in form of strip wound onto the core, whose form, size and configuration corresponds to those of the organ (or part of organ) which is to be replaced by implant.

Preferably strip is made of polymeric material, has **thickness** at least 0.005 mm, and is wound onto core under angle greater than 0 and at most 90 deg. , with the width of overlapping section 0.2-5 mm and the pitch equal or smaller than the width of the strip. Body may also comprise more than one **layer**, with winding pitch greater than the width of strip at least in one **layer**. Core is made as body of revolution, or in form of trunk with branching or shunting, e.g. bifurcation. At least one **layer** of prosthesis is made of

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material having vol.% of hollow space 25-94, specific surface of hollow space 0.1-9.0 micro m²/ micro m³, average distance between hollow spaces = 1.5-50 micro m, volume mean chord = 0.4-30 micro m, or of material with hollow space taking 1-35 vol.%, specific surface of hollow space 0.5-20.0 micro m²/ micro m³, average distance between hollow spaces = 0.5-15 micro m and volume mean chord = 0.1-10 micro m. The body of prosthesis may also include spirally applied plait made of the same polymeric material as strip, or of metal or carbon fibre.

An INDEPENDENT CLAIM is also included for the method of preparation of hollow prosthesis for implantation.

USE - Used in medicine, as artificial implants replacing **tubular** and other hollow internal organs or parts of internal organs, e.g. in intravascular surgery, surgery of extra-secretory organs, surgical oncology, gastroenterology, urology, gynaecology, neurosurgery, etc. and also in modelling of organs and their parts.

ADVANTAGE - New construction makes possible production of **thin walled** (0.03-0.2 mm) **tubular** prosthesis, and prosthesis of complex configuration. Material of prosthesis ensures good permeation of cell elements and connective tissue elements and is compatible with live tissue.

DESCRIPTION OF DRAWING(S) - The drawing shows single **layer** hollow cylindrical prosthesis, whose body is made of strip wound onto body shaping core.

Body 1

thin-walled hollow implantation prosthesis.

2

Dwg.1/10

L33 ANSWER 4 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1999-517299 [43] WPIDS

DOC. NO. CPI: C1999-150981

TITLE: Dual **porosity**

polytetrafluoroethylene tube,
e.g. for prosthetic vascular grafts.

DERWENT CLASS: A14 A31 A32 A93 D22

INVENTOR(S): CALCOTE, R; KOWLIGI, R R; WOLLNER, S

PATENT ASSIGNEE(S): (IMPR-N) IMPRA INC

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5935667	A	19990810	(199943)*		10

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
		Searcher : Shears	308-4994

09/510937

US 5935667	A Div ex	US 1993-10974	19930129
	Cont of	US 1995-460542	19950602
		US 1997-872093	19970610

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 5935667	A Div ex	US 5453235

PRIORITY APPLN. INFO: US 1993-10974 19930129; US 1995-460542
19950602; US 1997-872093 19970610

AN 1999-517299 [43] WPIDS

AB US 5935667 A UPAB: 19991020

NOVELTY - Dual **porosity PTFE tube** is made by preforming an assembly of two concentric **tubular** billets (29,31) one within the other, the inner and outer billets being of mixtures of **PTFE** particles and different proportions of a lubricant within the range of 10 to 30 wt.%, and the resin particles size being at least 355 microns m. The resulting billets are coextruded into a composite **tubular** extrudate (42) which is subsequently longitudinally expanded and sintered.

USE - Particularly as prosthetic vascular grafts to bypass occluded or damaged natural blood vessels, or to provide access for long term hemodialysis.

ADVANTAGE - Provides a **tube** or graft which has an inner surface with a **porosity** which prevents blood leakage and an outer surface with a **porosity** which enhances tissue in-growth.

DESCRIPTION OF DRAWING(S) - The figure shows the extrusion system

tubular billets 29,31
extrusion mandrel 32
extrusion die 34
extruded **tube** 42
Dwg.4/6

L33 ANSWER 5 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1999-442993 [37] WPIDS

DOC. NO. NON-CPI: N1999-330307

DOC. NO. CPI: C1999-130452

TITLE: Vascular endoprosthesis liner for treatment of vascular congestion and urological constriction by **balloon** angioplasty.

DERWENT CLASS: A14 A96 D22 P32

INVENTOR(S): GINGRAS, P; HERWECK, S A; KARWOSKI, T; MARTAKOS, P

PATENT ASSIGNEE(S): (ATRI-N) ATRIUM MEDICAL CORP

COUNTRY COUNT: 1

Searcher : Shears 308-4994

09/510937

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5925074	A	19990720	(199937)*		11

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5925074	A	US 1996-759861	19961203

PRIORITY APPLN. INFO: US 1996-759861 19961203

AN 1999-442993 [37] WPIDS

AB US 5925074 A UPAB: 19990914

NOVELTY - The liner(20) is a fluoropolymer **tube** that has been expanded to create a **porous** microstructure of circumferential disks(27) and **fibrils**(28). The **tube** has a negligible Poisson coupling. A **balloon** or stent on an inserting **catheter** is used to expand the liner beyond its elastic limit at the site of constriction or congestion.

USE - For the treatment of vascular congestion and urological constriction by **balloon** angioplasty.

ADVANTAGE - The nodal structure of the liner enables it to stretch by 5-10 times without rupturing or significantly changing its **porosity**. The structure also produces a very small Poisson coupling so that the length does not change as the liner is radially expanded. The disk structure provides good dimensional stability and strength.

DESCRIPTION OF DRAWING(S) - The drawing shows the microstructure of the liner.

Liner 20

Disks 27

Fibrils 28

Dwg.2A/5

L33 ANSWER 6 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1999-130331 [11] WPIDS

CROSS REFERENCE: 1993-303517 [38]; 1995-263194 [34]; 2000-037268 [54]

DOC. NO. NON-CPI: N1999-094822

DOC. NO. CPI: C1999-037969

TITLE: Implantable prosthesis especially vascular graft - consists of **porous** sintered **PTFE** structure with nodes interconnected by **fibrils** and defining tapering channels or pores.

Searcher : Shears 308-4994

09/510937

DERWENT CLASS: A14 A96 D22 P32
INVENTOR(S): HERWECK, S A; KARWOSKI, T; MARTAKOS, P
PATENT ASSIGNEE(S): (ATRI-N) ATRIUM MEDICAL CORP
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5861033	A	19990119	(199911)*		18

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5861033	A	CIP of	US 1992-850862 19920313
		Cont of	US 1993-31238 19930312
		Cont of	US 1995-502390 19950714
			US 1997-792571 19970130

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 5861033	A	Cont of US 5433909

PRIORITY APPLN. INFO: US 1993-31238 19930312; US 1992-850862
19920313; US 1995-502390 19950714; US
1997-792571 19970130

AN 1999-130331 [11] WPIDS
CR 1993-303517 [38]; 1995-263194 [34]; 2000-037268 [54]
AB US 5861033 A UPAB: 20000118

A novel implantable prosthesis consists of (a) a **porous PTFE tube** (10) having a uniformly sintered wall with a **porous** microstructure of nodes (12) and **fibrils** (14), tapered channels being defined by the node interspaces and extending through the wall; or (b) a uniformly sintered wall (10) of a single **porous** extruded **PTFE** resin (preferably of high molecular weight) having a **porous** microstructure of nodes (12) interconnected by **fibrils** (14), the interstitial spaces between the nodes (12) being tapered and extending through the wall.

USE - Especially as a vascular graft.

ADVANTAGE - The structure has a high radial tensile strength, high burst pressure and suture strength characteristics, high flexibility and high radial twist compression resistance, so that the **tube** can undergo significant bending or twist before lumen collapse or kinking occurs. Additionally, the **fibrils** of the structure impede fluid leakage while allowing cellular growth through the interstitial spaces.

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09/510937

Dwg.1/8

L33 ANSWER 7 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1999-267434 [23] WPIDS
DOC. NO. NON-CPI: N1999-199255
DOC. NO. CPI: C1999-079434
TITLE: Gasket, for sealing pipes - comprises
poly tetra fluoro-
ethylene , and has fibril and
nodes when film diameter has specific value.
DERWENT CLASS: A14 A32 A88 Q65
PATENT ASSIGNEE(S): (NIGO) JAPAN GORE TEX INC
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 11080705	A	19990326	(199923)*		10

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 11080705	A	JP 1997-243098	19970908

PRIORITY APPLN. INFO: JP 1997-243098 19970908

AN 1999-267434 [23] WPIDS

AB JP 11080705 A UPAB: 19990630

NOVELTY - Gasket is obtained by laminating biaxially oriented
porous polytetrafluoroethylene (PTFE)
film which has fibrils (1) connected to nodes (2). When
the diameter or long axis of the film exceeds 3 mu m per scanning
area of 300 mu m², the nodes are non-existing.

USE - Used for sealing flange parts of pipings and
shafts.

ADVANTAGE - The film has good tensile strength and fracture
elongation. Gaskets are obtained even at high temperature and
pressure. Long life of gasket is ensured which has high bending
rigidity, corrosion resistance and heat resistance.

DESCRIPTION OF DRAWING - The figure illustrates the
PTFE film. (1) Fibril; and (2) Node.

Dwg.9/9

L33 ANSWER 8 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
DUPLICATE 1

ACCESSION NUMBER: 1999-012877 [02] WPIDS

DOC. NO. NON-CPI: N1999-009663

DOC. NO. CPI: C1999-004484

Searcher : Shears 308-4994

09/510937

TITLE: Sealant ring for **piping**, rotary shaft,
precision electronic device - has **poly**
tetra fluoroethylene material in
which orientation direction of **fibril** is
along thickness direction.
DERWENT CLASS: A14 A88 Q33 Q65
PATENT ASSIGNEE(S): (NIGO) JAPAN GORE TEX INC
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 10281291	A	19981023	(199902)*		7

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 10281291	A	JP 1997-83017	19970401

PRIORITY APPLN. INFO: JP 1997-83017 19970401

AN 1999-012877 [02] WPIDS

AB JP 10281291 A UPAB: 19990113

A sealant ring (10) is made of a uniaxial stretching **porous**
polytetrafluoroethylene (PTFE) material. A
tube (8) of **PTFE** material is cut for every
predetermined length in longitudinal direction. The direction of
the orientation of the **fibril** of the **PTFE**
material is along the thickness direction.

ADVANTAGE - Improves productivity. Eases manufacture. Improves
adhesion effect.

Dwg.4/12

L33 ANSWER 9 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1998-506748 [43] WPIDS

DOC. NO. CPI: C1998-153041

TITLE: Mass-producible electrolytic ozone generator useful
in sterilisation - comprises ozoniser, anode and
cathode water boxes, equilibrium device and
circulating **tubes**.

DERWENT CLASS: D22 E36 J03

INVENTOR(S): GAO, R; HU, S; ZHOU, Y

PATENT ASSIGNEE(S): (HUSS-I) HU S; (UYWU-N) UNIV WUHAN; (SONG-I) SONG H

COUNTRY COUNT: 81

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
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Searcher : Shears 308-4994

09/510937

WO 9840535 A1 19980917 (199843)* ZH 31
RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW
NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI
GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
TJ TM TR TT UA UG US UZ VN YU ZW
AU 9862884 A 19980929 (199906)
CN 1195643 A 19981014 (199909)
JP 11001789 A 19990106 (199911) 12
JP 3025473 B2 20000327 (200020) 12

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9840535	A1	WO 1998-CN30	19980304
AU 9862884	A	AU 1998-62884	19980304
CN 1195643	A	CN 1997-122126	19971119
JP 11001789	A	JP 1998-57071	19980309
JP 3025473	B2	JP 1998-57071	19980309

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9862884	A Based on	WO 9840535
JP 3025473	B2 Previous Publ.	JP 11001789

PRIORITY APPLN. INFO: CN 1997-122126 19971119; CN 1997-209412U
19970307

AN 1998-506748 [43] WPIDS

AB WO 9840535 A UPAB: 19981104

An electrolytic ozone-generating apparatus comprises an ozoniser (8), anode water box (18) which is connected to the anode chamber of the ozoniser and circulating tube (7) that passes through the anode, cathode water box (4) which is linked to the cathode chamber of the ozoniser and circulating tube (6). The ozoniser has an independent cation-exchange membrane, both sides of which have close contact with anodic catalyst sheet and cathodic catalyst sheet respectively, whose other sides are in contact with the corresponding porous anode and cathode current-collecting plaques.

Also claimed is a method for manufacturing an ozoniser (8) including preparation of: (a) a cathodic catalyst sheet by moulding a paste of 5-15 wt.% platinum (Pt) in platinum-on-carbon (Pt-C) in polytetrafluoroethylene (PTFE) and some water at 80 deg. C then rolling and drying to a 0.1-0.2-mm thick sheet with 5-15 wt.% PTFE, with respect to

Searcher : Shears 308-4994

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Pt-C; (b) 0.2-0.3-mm thick anodic catalyst sheet similarly from lead dioxide (PbO₂) with 1-5 wt.% PTFE; (c) a porous anode current-collecting sheet made from a sintered porous titanium (Ti) foil by degreasing, treating with 5-20 wt.% hydrochloric acid, washing, coating with an organic solution containing Pt, tin (Sn) and antimony for thermal oxidation at 500-530 deg. C to form a layer of conductive oxide; and (d) a porous cathode current-collecting sheet as (c) but without forming the oxide layer.

USE - The electrolytic ozone-generating apparatus can be applied to produce ozone e.g. for sterilisation.

ADVANTAGE - The apparatus is mass-producible at low cost. It can provide stable operation with high ozone generation efficiency under pressure.

Dwg.1/4

L33 ANSWER 10 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1998-110705 [10] WPIDS

DOC. NO. NON-CPI: N1998-088533

DOC. NO. CPI: C1998-036501

TITLE: Flexible tubular fluoro-polymer membrane for e.g. gaskets - has at least two layers of fluoro-polymer membrane each showing node and fibril structure.

DERWENT CLASS: A14 A88 Q67

INVENTOR(S): EGRES, R G

PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L

COUNTRY COUNT: 69

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
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WO 9802687	A1	19980122	(199810)*	EN	54
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RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE

HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW

MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN

AU 9739593	A	19980209	(199823)		
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EP 912853	A1	19990506	(199922)	EN	
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R: AT CH DE FR GB IT LI NL

US 6016848	A	20000125	(200012)		
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APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
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WO 9802687	A1	WO 1997-US12468	19970715
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AU 9739593	A	AU 1997-39593	19970715
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EP 912853	A1	EP 1997-936962	19970715
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Searcher : Shears 308-4994

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US 6016848 A CIP of

WO 1997-US12468 19970715
US 1996-682037 19960716
US 1997-824241 19970325

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9739593	A Based on	WO 9802687
EP 912853	A1 Based on	WO 9802687

PRIORITY APPLN. INFO: US 1997-824241 19970325; US 1996-682037
19960716

AN 1998-110705 [10] WPIDS

AB WO 9802687 A UPAB: 19980309

A flexible **tubular** fluoropolymer membrane (14) of inner diameter above 25.4 mm comprises at least two layers of fluoropolymer membrane (17) each showing a node and **fibril** structure.

Preferably the fluoropolymer membrane comprises expanded **polytetrafluoroethylene (PTFE)** at least partially densified and containing a filler as the inner layer. The outer layer comprises fluorinated ethylene propylene copolymer, PFA, liquid crystal polymer or **PTFE** of lower **porosity** than the outer layer.

USE - The **tubular** membrane is used for gasketing or as a vascular graft. It has improved flex resistance.
Dwg.7/17

L33 ANSWER 11 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1999-044430 [04] WPIDS

CROSS REFERENCE: 1997-402276 [37]

DOC. NO. NON-CPI: N1999-032463

DOC. NO. CPI: C1999-013767

TITLE: Graft for in situ bypass holds leaflets of venous valve open - has microstructure of nodes interconnected by **fibrils** with **fibril** lengths varying along length of graft.

DERWENT CLASS: A96 D22 P32

INVENTOR(S): CAMPBELL, C V; CHASTAIN, J H; KOVACH, L J; LAGUNA, A J; POND, D B

PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5843171	A	19981201 (199904)*			15
Searcher				:	Shears 308-4994

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APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5843171	A CIP of	US 1996-592912	19960129
		US 1997-788628	19970124

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 5843171	A CIP of	US 5747128

PRIORITY APPLN. INFO: US 1997-788628 19970124; US 1996-592912
19960129

AN 1999-044430 [04] WPIDS

CR 1997-402276 [37]

AB US 5843171 A UPAB: 19990127

An intra-luminal graft is in the form of a **porous PTFE tube** which has a microstructure of nodes interconnected by **fibrils**. The **tube** has a luminal surface with first (13) and second (11) regions. The **fibril** lengths (45A) in the second region have a greater mean length than those (45B) in the first regions.

USE - As a prosthetic vascular graft. The graft is used as an in situ bypass in which a vein is transected to form a vein segment with the graft inserted into a venous valve in the vein segment. It holds the leaflets of the valve in an open condition. Various side branches of the vein segment may be occluded by the graft.

ADVANTAGE - The graft has internal radial support as opposed to using an additional external member. The pore size of the **PTFE** is such that the graft is impervious to leakage of blood and does not require pre-clotting.

Dwg.5/9

L33 ANSWER 12 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1998-537571 [46] WPIDS

DOC. NO. NON-CPI: N1998-419516

DOC. NO. CPI: C1998-161589

TITLE: **Polytetrafluoroethylene porous**
mouldings - consisting of **porous** material
having internal structure containing connected with
fibril and having specified matrix tensile
strength.

DERWENT CLASS: A14 A83 A88 F07 P73

PATENT ASSIGNEE(S): (YUMI-N) YUMINGTAI PROCESSING CO LTD

COUNTRY COUNT: 1

PATENT INFORMATION:

Searcher : Shears 308-4994

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PATENT NO	KIND	DATE	WEEK	LA	PG
JP 10237203	A	19980908	(199846)*		8

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 10237203	A	JP 1997-326658	19971127

PRIORITY APPLN. INFO: JP 1996-350172 19961227

AN 1998-537571 [46] WPIDS

AB JP 10237203 A UPAB: 19981118

PTFE porous mouldings consist of **PTFE**

porous material having internal structure containing knots connected with **fibril** and have matrix tensile strength (MTS) of 3,000-12,000 psi and coarseness index (CI) of 0.02-0.20 g/cc/psi. Also claimed are: (1) **PTFE** composite mouldings containing a sheet of the **PTFE porous** mouldings and layers consisting of perfluorocarbon resin sheet having compact structure and /or metal sheet or graphite sheet; (2) sheet-like **PTFE** high density mouldings obtained by heating and compressing sheet of the **PTFE porous** mouldings and baking it at a temperature not lower than the m. pt. of the **PTFE** and lower than the heat decomposition temperature of the **PTFE**; and (3) sheet-like **PTFE** high density mouldings obtained by heating and compressing sheet of the **PTFE porous** mouldings at temperature not lower than the m. pt. of the **PTFE** and lower than the heat decomposition temp. of the **PTFE**.

USE - The **porous** mouldings are useful as **pipng** of plants, gaskets of containers and moistureproof materials for clothing.

ADVANTAGE - The **porous** mouldings have high cold flow resistance and chemical resistance.

Dwg.0/3

L33 ANSWER 13 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1997-402276 [37] WPIDS

CROSS REFERENCE: 1999-044430 [04]

DOC. NO. NON-CPI: N1997-334628

DOC. NO. CPI: C1997-129713

TITLE: **Porous poly tetra**

fluoroethylene tube for vascular

by-pass grafting - comprises regions of long fibrous structure and denser regions, providing high radial compressive strength and in-situ

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balloon distension.

DERWENT CLASS: A14 A32 A96 D22 P32
INVENTOR(S): CAMPBELL, C V; CHASTAIN, J H; LAGUNA, A J; POND, D
B
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 68
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

WO 9727820	A1	19970807	(199737)	* EN	36
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE					
HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW					
MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN					
AU 9711288	A	19970822	(199801)		
US 5747128	A	19980505	(199825)		
EP 877582	A1	19981118	(199850)	EN	
R: DE FR GB					
JP 2000503874 W		20000404	(200027)		42

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

WO 9727820	A1	WO 1996-US19301	19961204
AU 9711288	A	WO 1996-US19301	19961204
		AU 1997-11288	19961204
US 5747128	A	US 1996-592912	19960129
EP 877582	A1	EP 1996-942135	19961204
		WO 1996-US19301	19961204
JP 2000503874 W		WO 1996-US19301	19961204
		JP 1997-527614	19961204

FILING DETAILS:

PATENT NO	KIND	PATENT NO

AU 9711288	A Based on	WO 9727820
EP 877582	A1 Based on	WO 9727820
JP 2000503874 W	Based on	WO 9727820

PRIORITY APPLN. INFO: US 1996-592912 19960129

AN 1997-402276 [37] WPIDS

CR 1999-044430 [04]

AB WO 9727820AN 1 UPAB: 20000606

A tube comprises porous

polytetrafluoroethylene (PTFE) having a

microstructure of nodes interconnected by fibrils, with

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regions of differing **fibril** length, measured at the luminal surface of the **tube**.

Preferably, the regions are ring-shaped, and alternate along the **tube** length.

The lengths are preferably at least 20 (more preferably 50, especially 100)% greater in the second regions.

Other region shapes are feasible, preferably spiral and Z-shaped.

The **tube** preferably has a compression resistance of greater than 400 g.

The **tube** preferably recoils minimally after distension to greater diameter, especially beyond which it will not distend in normal use.

USE - A **tube** for vascular grafting, self-supporting against radial forces, which may be used in intra-luminal- and bypass grafting.

ADVANTAGE - The **tube** radially self-supporting; and is also circumferentially distensible, allowing the surgeon to size it suitably for the graft. A **balloon catheter** may be used for this operation, within the vessel. It therefore resembles a stent. The **tube** may be tapered if necessary. The **tube** has kink resistance and does not shrink after distention, remaining open for flow.
Dwg.1/8

L33 ANSWER 14 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 ACCESSION NUMBER: 1997-385058 [35] WPIDS
 CROSS REFERENCE: 1999-561803 [47]
 DOC. NO. NON-CPI: N1997-320603
 DOC. NO. CPI: C1997-123416
 TITLE: Implantable vascular graft of expanded **PTFE**
 - with outer and inner **tubes** of differing
porosity..
 DERWENT CLASS: A14 A96 D22 P32 P34
 INVENTOR(S): DORMIER, E J; HENDERSON, J; LENTZ, D J; ZDRAHALA, R
 J
 PATENT ASSIGNEE(S): (MEDX) MEADOX MEDICALS INC
 COUNTRY COUNT: 75
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9725938	A1	19970724	(199735)*	EN	23
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN					

Searcher : Shears 308-4994

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AU 9717582 A 19970811 (199747)
US 5800512 A 19980901 (199842)
EP 879029 A1 19981125 (199851) EN
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 11504548 W 19990427 (199927) 22
AU 711304 B 19991007 (199954)
US 6036724 A 20000314 (200020)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9725938	A1	WO 1997-US1720	19970122
AU 9717582	A	AU 1997-17582	19970122
US 5800512	A	US 1996-588052	19960122
EP 879029	A1	EP 1997-904915	19970122
		WO 1997-US1720	19970122
JP 11504548	W	JP 1997-526318	19970122
		WO 1997-US1720	19970122
AU 711304	B	AU 1997-17582	19970122
US 6036724	A Div ex	US 1996-588052	19960122
		US 1998-8265	19980116

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9717582	A Based on	WO 9725938
EP 879029	A1 Based on	WO 9725938
JP 11504548	W Based on	WO 9725938
AU 711304	B Previous Publ. Based on	AU 9717582 WO 9725938
US 6036724	A Div ex	US 5800512

PRIORITY APPLN. INFO: US 1996-588052 19960122; US 1998-8265
19980116

AN 1997-385058 [35] WPIDS

CR 1999-561803 [47]

AB WO 9725938 A UPAB: 20000426

An implantable **tubular** prosthesis (10) comprises an expanded **PTFE** composite **tubular** structure having a clearly defined tissue contacting outer **tube** (12) and a weaker concentric inner **tube** (14) having a blood contacting inner surface. The inner and outer **tubes** have a given **porosity** defined by the node and **fibril** spacing of the expanded structure which is different on either side of the interface of the two **tubes** being higher for the inner **tube**.

USE - An implantable vascular graft of expanded **PTFE**

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fibres forming concentric tubes of different porosity.

ADVANTAGE - Reduced endothelization promotion.

Dwg.1/5

L33 ANSWER 15 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1997-118796 [11] WPIDS
CROSS REFERENCE: 1998-494603 [42]
DOC. NO. NON-CPI: N1997-097885
DOC. NO. CPI: C1997-038310
TITLE: Tube for lining living blood vessel, esp.
anastomosis, or repairing prosthetic vascular graft
- uses tube that increases in
circumference with applied pressure up to
circumference which is unchanged by further
pressure increases.
DERWENT CLASS: A96 D22 P32 Q67
INVENTOR(S): CAMPBELL, C V; LAGUNA, A J; LEWIS, J D; MAYRAND, M
E; MYERS, D J
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 67
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9702791	A1	19970130	(199711)*	EN	46
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE					
HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW					
MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN					
AU 9663964	A	19970210	(199724)		
EP 840577	A1	19980513	(199823)	EN	
R: DE FR GB					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9702791	A1	WO 1996-US10936	19960626
AU 9663964	A	AU 1996-63964	19960626
		WO 1996-US10936	19960626
EP 840577	A1	EP 1996-923461	19960626
		WO 1996-US10936	19960626

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9663964	A Based on	WO 9702791
	Searcher	: Shears 308-4994

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EP 840577

A1 Based on

WO 9702791

PRIORITY APPLN. INFO: US 1995-499423 19950707

AN 1997-118796 [11] WPIDS

CR 1998-494603 [42]

AB WO 9702791 A UPAB: 19981021

An articles comprising a **tube** has a circumference which increases in response to the application of internal pressure upto a second circumference with remains the same on application of additional pressure.

Also claimed are: (i) a method of making the claimed **tube**; (ii) method of repairing an arteriovenous vascular graft; and (iii) method of lining a blood conduit with article having longitudinal axis.

Pref. the **tube** is porous PTFE

(10) and has helical **layers** (14, 16) of porous PTFE film or tape wound around it. The porous PTFE has a microstructure of nodes connected by fibrils. The **tube** has a min. recoil at most 7 % and a wall **thickness** of at most 0.25 mm. The **tube** comprises a vascular graft, pref. an intraluminal graft and has a wall **thickness** of 0.25mm, pref. 0.10mm. The **tube** is branched an has at least three ends. The intraluminal graft is secured to a blood conduit by a stent or sutures. The circumference is increased by inflation of a **balloon** or blood pressure. Pref. the **tube** comprises an interior liner within a **tubular** form selected from **tubes**, **pipes** and blood conduits. Pref. the blood conduits are prosthetic vascular grafts or living blood vessels. The inner liner covers an anastomosis.

USE - Vascular grafts for lining living blood vessels, esp. covering an anastomosis, or repairing prosthetic vascular grafts (claimed).

ADVANTAGE - **Tube** conforms to vessel or graft and does not subsequently recoil.

Dwg.2/7

L33 ANSWER 16 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1997-164413 [15] WPIDS

DOC. NO. NON-CPI: N1997-135483

DOC. NO. CPI: C1997-052902

TITLE: Implantable **tubular** vascular prosthesis having enhanced strength etc. - consisting of expanded PTFE **tube** with helical windings of non-porous, non-elastic, essentially PTFE, multifilament yarn..

DERWENT CLASS: A14 A96 D22 P32 P34

INVENTOR(S): DORNIER, E J; LENTZ, D J; POPADIUK, N; SCHMITT, P; ZDRAHALA, R J; DORMIER, E J

Searcher : Shears 308-4994

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PATENT ASSIGNEE(S): (MEDX) MEADOX MEDICALS INC
COUNTRY COUNT: 76
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5607478	A	19970304	(199715)*		10
WO 9733533	A1	19970918	(199743)	EN	221
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL					
OA PT SD SE SZ UG					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI					
GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD					
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT					
UA UG UZ VN YU					
AU 9723228	A	19971001	(199805)		
EP 893976	A1	19990203	(199910)	EN	
R: DE ES FR GB IT NL					
JP 2000502589 W		20000307	(200023)		22

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5607478	A	US 1996-616047	19960314
WO 9733533	A1	WO 1997-US3901	19970313
AU 9723228	A	AU 1997-23228	19970313
EP 893976	A1	EP 1997-915924	19970313
		WO 1997-US3901	19970313
JP 2000502589 W		JP 1997-532806	19970313
		WO 1997-US3901	19970313

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9723228	A Based on	WO 9733533
EP 893976	A1 Based on	WO 9733533
JP 2000502589 W	Based on	WO 9733533

PRIORITY APPLN. INFO: US 1996-616047 19960314

AN 1997-164413 [15] WPIDS

AB US 5607478 A UPAB: 19970410

An implantable **tubular** prosthesis is an expanded **PTFE tube** having a microporous structure defined by nodes interconnected by **fibrils** and at least one winding of non-porous, non-elastic, multifilament, essentially **PTFE** yarn helically wrapped about at least a portion of the length of the **tube**.

USE - Used as a vascular prosthesis.

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ADVANTAGES -Enhanced radial strength, improved suture retention strength and redn. in tear propagation. The **PTFE** yarn wrapping improves the strength and tear properties of the prosthesis while maintaining desired **porosity** characteristics.

Dwg.6/7

L33 ANSWER 17 OF 66 SCISEARCH COPYRIGHT 2000 ISI (R)
 ACCESSION NUMBER: 97:664492 SCISEARCH
 THE GENUINE ARTICLE: XU176
 TITLE: Effects of **balloon** dilatation on ePTFE structural characteristics
 AUTHOR: Salzmann D L; Yee D C; Roach D J; Berman S S; Williams S K (Reprint)
 CORPORATE SOURCE: UNIV ARIZONA, DEPT SURG, SECT SURG RES, TUCSON, AZ 85724 (Reprint); UNIV ARIZONA, DEPT SURG, SECT SURG RES, TUCSON, AZ 85724; UNIV ARIZONA, DEPT RADIOL, SECT VASC INTERVENT RADIOL, TUCSON, AZ 85724
 COUNTRY OF AUTHOR: USA
 SOURCE: JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (15 SEP 1997) Vol. 36, No. 4, pp. 498-507.
 Publisher: JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK, NY 10158-0012.
 ISSN: 0021-9304.
 DOCUMENT TYPE: Article; Journal
 FILE SEGMENT: LIFE
 LANGUAGE: English
 REFERENCE COUNT: 11

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The search for less invasive treatments for cardiovascular disease has lead to the development of endovascular stent grafts, metallic and alloy stents surrounded by prosthetic vascular graft material. Introduced intravascularly, the deployment of stent grafts requires **balloon** dilatation of the device which results in expansion of the stent along with the vascular graft material. We hypothesized that **balloon** dilatation of stent grafts would alter the physical structure of the prosthetic graft material. In this study, noncompliant angioplasty **balloons** were used to dilate expanded **polytetrafluoroethylene** (ePTFE), a material commonly used for endovascular stent-graft technology. The maximal outer diameter (inflated **balloon** within the lumen) and the recoiled outer diameter (**balloon** removed) of two types of ePTFE, 3-mm inside diameter (i.d.) **thin wall** (30-mu m internodal distance) and 4-mm i.d. standard wall (30-mu m internodal distance), were measured to compare material recoil. Following **balloon** dilatation, ePTFE samples were prepared for scanning electron microscopic examination and the following parameters were measured: wall thickness, internodal distance, nodal width, interfiber distance, and fiber width. Following primary dilatation, both types of ePTFE recoiled

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approximately 20% regardless of inflated **balloon** diameter. However, following eight repetitive **balloon** dilatations, recoil decreased to approximately 10%. Scanning electron microscopic analysis revealed variations in internodal distance and significant decreases in wall thickness, nodal thickness, and interfiber distance. Fiber width was significantly decreased following dilatation of 3 mm, but not 4 mm ePTFE. Our data support our initial hypothesis that **balloon** dilatation alters the structure of ePTFE. (C) 1997 John Wiley & Sons, Inc.

L33 ANSWER 18 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 ACCESSION NUMBER: 1996-171470 [17] WPIDS
 DOC. NO. NON-CPI: N1996-144078
 DOC. NO. CPI: C1996-054098
 TITLE: Thermally stable, stretched, porous
polytetrafluoroethylene material -
 comprises a microstructure of **PTFE**
 homopolymer nodes interconnected by modified
PTFE fibrils.
 DERWENT CLASS: A14 A85 A94 A96 D22 J01 X12
 INVENTOR(S): BRANCA, P A
 PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
 COUNTRY COUNT: 46
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9607529	A1	19960314	(199617)*	EN	17
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB HU JP KP KR KZ					
LK LU LV MG MN MW NL NO NZ PL PT RO RU SD SE SK UA UZ VN					
AU 9480775	A	19960327	(199627)		
EP 777567	A1	19970611	(199728)	EN	
R: DE FR GB IT NL SE					
US 5708044	A	19980113	(199809)		8
AU 688404	B	19980312	(199822)		
JP 10505378	W	19980526	(199831)		18
CA 2183350	C	19990427	(199935)	EN	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9607529	A1	WO 1994-US11692	19941014
AU 9480775	A	AU 1994-80775	19941014
EP 777567	A1	EP 1994-931848	19941014
		WO 1994-US11692	19941014
US 5708044	A Cont of	US 1994-300258	19940902
		US 1996-584576	19960110
Searcher		: Shears	308-4994

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AU 688404	B	AU 1994-80775	19941014
JP 10505378	W	WO 1994-US11692	19941014
		JP 1996-509453	19941014
CA 2183350	C	CA 1994-2183350	19941014
		WO 1994-US11692	19941014

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9480775	A Based on	WO 9607529
EP 777567	A1 Based on	WO 9607529
AU 688404	B Previous Publ. Based on	AU 9480775 WO 9607529
JP 10505378	W Based on	WO 9607529
CA 2183350	C Based on	WO 9607529

PRIORITY APPLN. INFO: US 1994-300258 19940902; US 1996-584576
19960110

AN 1996-171470 [17] WPIDS

AB WO 9607529 A UPAB: 19960428

A stretched **porous PTFE** material having a microstructure of nodes interconnected by **fibrils** in which the material comprises a **PTFE** homopolymer and a modified **PTFE** polymer. Also claimed is the prepn. of a **porous PTFE** material comprising (a) forming an aq. dispersion of **PTFE** homopolymer and a modified **PTFE** polymer, (b) coagulating the solids from the dispersion, (c) lubricating and paste extruding the coagulated material, and (d) stretching the material.

USE - The blend is used for the mfr. of a tape, filament, rod or **tube** (all claimed) e.g. for a medical implantable device, cable insulation, filtration membrane or gasketing material.

ADVANTAGE - The blend provides a desired balance of node size and **fibril** length with the additional property of thermal stability in the resulting stretch material.

Dwg.0/2

ABEQ US 5708044 A UPAB: 19980302

A stretched **porous PTFE** material having a microstructure of nodes interconnected by **fibrils** in which the material comprises a **PTFE** homopolymer and a modified **PTFE** polymer. Also claimed is the prepn. of a **porous PTFE** material comprising (a) forming an aq. dispersion of **PTFE** homopolymer and a modified **PTFE** polymer, (b) coagulating the solids from the dispersion, (c) lubricating and paste extruding the coagulated material, and (d) stretching the material.

USE - The blend is used for the mfr. of a tape, filament, rod or **tube** (all claimed) e.g. for a medical implantable

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device, cable insulation, filtration membrane or gasketing material.

ADVANTAGE - The blend provides a desired balance of node size and fibril length with the additional property of thermal stability in the resulting stretch material.

Dwg.0/2

L33 ANSWER 19 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1996-171343 [17] WPIDS
DOC. NO. NON-CPI: N1996-144004
DOC. NO. CPI: C1996-054007
TITLE: Asymmetrical porous PTFE
tube - comprises tube of
porous PTFE having micro
structure of nodes inter-connected by
fibrils with opposing first and second
ends.
DERWENT CLASS: A14 A32 A96 D22 P32 P34
INVENTOR(S): KASIC, J F; SIMMS, W; SIMMS, W J
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 45
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9607370	A1	19960314	(199617)*	EN	25
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB HU JP KP KR KZ					
LK LU LV MG MN MW NL NO NZ PL PT RO RU SD SE SK UA UZ VN					
AU 9645961	A	19960327	(199627)		
EP 778753	A1	19970618	(199729)	EN	
R: DE FR GB					
JP 10505266	W	19980526	(199831)		28
EP 778753	B1	19990922	(199943)	EN	
R: DE FR GB					
DE 69420870	E	19991028	(199951)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9607370	A1	WO 1994-US10607	19941101
AU 9645961	A	AU 1996-45961	19941101
EP 778753	A1	EP 1994-932170	19941101
		WO 1994-US10607	19941101
JP 10505266	W	WO 1994-US10607	19941101
		JP 1996-509451	19941101
EP 778753	B1	EP 1994-932170	19941101
		WO 1994-US10607	19941101
DE 69420870	E	DE 1994-620870	19941101

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EP 1994-932170 19941101
WO 1994-US10607 19941101

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9645961	A	Based on	WO 9607370
EP 778753	A1	Based on	WO 9607370
JP 10505266	W	Based on	WO 9607370
EP 778753	B1	Based on	WO 9607370
DE 69420870	E	Based on	EP 778753
		Based on	WO 9607370

PRIORITY APPLN. INFO: US 1994-300306 19940902

AN 1996-171343 [17] WPIDS

AB WO 9607370 A UPAB: 19960428

The tapered **porous PTFE tube** comprises
a **tube of porous PTFE** having a
micro-structure of nodes interconnected by **fibrils** and
having opposing first and second ends. Both the first and second
ends have an inside and a wall thickness. The inside diameter of the
first end is less than or equal to ninety percent of the inside
diameter of the second end and the wall thickness of the second end
is greater than or equal to the wall thickness of the first end.
The prodn. of tapered **porous PTFE tube**
is also claimed.

USE - Esp. for implantable vascular graft applications as well
as in industrial applications e.g. as a filter.

ADVANTAGE - Prevents adhesions around intramammary coronary
grafts.

Dwg.0/7

L33 ANSWER 20 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1996-068726 [07] WPIDS

DOC. NO. NON-CPI: N1996-057787

DOC. NO. CPI: C1996-022347

TITLE: Expandable endovascular stent has liner or cover of
polymer **tube** - which has been extruded,
stretched, radially dilated and re-sintered giving
low radial expansion coefficient and radial
expansion ratio.

DERWENT CLASS: A14 A96 B07 D22 P32 P34

INVENTOR(S): COLONE, W M

PATENT ASSIGNEE(S): (ENDO-N) ENDOMED INC

COUNTRY COUNT: 20

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
			Searcher	:	Shears 308-4994

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WO 9600103 A1 19960104 (199607)* EN 58
 RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
 W: CA JP US
EP 767684 A1 19970416 (199720) EN
 R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
JP 10506021 W 19980616 (199834) 46

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9600103	A1	WO 1995-US7326	19950607
EP 767684	A1	EP 1995-923776	19950607
		WO 1995-US7326	19950607
JP 10506021	W	WO 1995-US7326	19950607
		JP 1996-503194	19950607

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 767684	A1 Based on	WO 9600103
JP 10506021	W Based on	WO 9600103

PRIORITY APPLN. INFO: US 1994-265794 19940627

AN 1996-068726 [07] WPIDS

AB WO 9600103 A UPAB: 19960222

Porous tube consists of highly crystalline **polytetra fluoro ethylene (PTFE)** polymer. It is produced by extruding a lubricant/**PTFE** resin blend to form a **tube** with a longitudinal axis, a primary inner diameter and a primary length. It is heated to remove the lubricant. The **tube** is then stretched longitudinally to give it a secondary length greater than its primary length. The elongate **tube** is sintered and then radially expanded before further sintering to contract the radially expanded **tube**.

Also claimed is a **tube-like** medical implant which includes a **PTFE tube** made as above and having a microstructure of nodes interconnected by **fibrils**.

The elongate **tubing** is restrained to prevent its longitudinal contraction during sintering. The stent (48) includes a radially pre-dilated **PTFE tube** (50) disposed as a cover endovascular stent support (52). This is useful in treating relatively short vessel lengths, e.g. 0.5-4 cm. The support may be a **balloon-expandable**, in which case it must have sufficient strength and elasticity to be expanded and retain its expanded dia., e.g. silver, tantalum, stainless steel, gold, titanium, plastic.

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USE - For use as liners and covers for expandable stents used to open and support aortic blood vessels.

ADVANTAGE - The **tube** retains its tensile strength and other physical properties after being expanded.

Dwg.2A/7

L33 ANSWER 21 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1996-058174 [06] WPIDS
DOC. NO. NON-CPI: N1996-048577
DOC. NO. CPI: C1996-019297
TITLE: Coronary bypass procedure - using **tubular**
sheath of biocompatible material to protect blood
conduit.
DERWENT CLASS: A96 D22 P32
INVENTOR(S): WALBURN, F J
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 45
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9535072	A2	19951228	(199606)*	EN	18
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB HU JP KP KR KZ					
LK LU LV MG MN MW NL NO NZ PL PT RO RU SD SE SK UA UZ VN					
AU 9511284	A	19960115	(199620)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9535072	A2	WO 1994-US12467	19941101
AU 9511284	A	AU 1995-11284	19941101

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9511284	A Based on	WO 9535072

PRIORITY APPLN. INFO: US 1994-261420 19940617

AN 1996-058174 [06] WPIDS

AB WO 9535072 A UPAB: 19960212

Method of using a **tubular** sheath of biocompatible material with interior and exterior surfaces comprises surgically exposing a blood conduit of a patient and dissecting it from the surrounding tissue, severing it, placing the sheath about it and anastomising the inserted end of the conduit to a coronary artery.

Also claimed is a coronary bypass procedure to protect a blood

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conduit involving using the sheath as above.

Pref. the sheath is of **porous**, expanded **PTFE** with a microstructure of nodes interconnected by **fibrils** of length not more than 5 microns and with a shorter **fibril** length on the interior surface. Pref. part of the sheath is radio-opaque.

USE - Used for an internal mammary artery (IMA) having a pedicle, an arterial or venous graft or a gastroepiploic artery (all claimed).

ADVANTAGE - The covering is supple, prevents the formation of adhesions and scar tissue, reduces surgery time, reduces the possibility of injury to the IMA in the case of repeat surgery and is clampable during surgery.

Dwg.0/10

L33 ANSWER 22 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1995-404007 [51] WPIDS
DOC. NO. NON-CPI: N1995-292517
DOC. NO. CPI: C1995-173530
TITLE: Radially expandable **PTFE tubes**
as liners for endo vascular stents - allowing
50-400% expansion before structural integrity is
lost..
DERWENT CLASS: A14 A96 D22 P73
INVENTOR(S): COLONE, W M
PATENT ASSIGNEE(S): (ENDO-N) ENDOMED INC
COUNTRY COUNT: 19
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9530538	A1	19951116	(199551)*	EN	29
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: CA JP					
EP 758953	A1	19970226	(199714)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 10506291	W	19980623	(199835)		25

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9530538	A1	WO 1995-US5490	19950503
EP 758953	A1	EP 1995-917805	19950503
		WO 1995-US5490	19950503
JP 10506291	W	JP 1995-529063	19950503
		WO 1995-US5490	19950503

FILING DETAILS:

Searcher : Shears 308-4994

09/510937

PATENT NO	KIND	PATENT NO
EP 758953	A1 Based on	WO 9530538
JP 10506291	W Based on	WO 9530538

PRIORITY APPLN. INFO: US 1994-239239 19940506

AN 1995-404007 [51] WPIDS

AB WO 9530538 A UPAB: 19951221

Tubular medical implants of **porous**, highly crystalline **PTFE** having a microstructure of **fibril** -interconnected nodes are claimed which are permanently expandable by radial force from a small mfd. dia. to a larger implantation dia. with structural integrity such that (i) the Radial Expansion Coefft. (REC) for 50% expansion is below 2.0 (esp. below 1.0); (ii) the Radial Expansion Ratio (RER) for 50% expansion is below 30 (esp. below 5); (iii) the ratio of Reduction Ratio (RR) to lubricant for 50% expansion is 5 or less; and/or (iv) the structural integrity is maintained an expansion by 50-150% such that an increase in radial force is required for further expansion.

ADVANTAGE - The **tubes** can be used in combination (esp. as liners) for endovascular stents (claimed), being expandable at 5-10 atmos. and allowing the length of anatomy to be treated by **thin-walled tubes** to be extended an account of the low REC and RER values permitting 50-400% expansion before loss of structural integrity.
Dwg.0/1

L33 ANSWER 23 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1995-161533 [21] WPIDS

DOC. NO. NON-CPI: N1995-126744

DOC. NO. CPI: C1995-074790

TITLE: Microporous integrally reinforced **PTFE** vascular graft - is produced by twisting and sintering a ram-extruded, longitudinally ribbed **tube**.

DERWENT CLASS: A14 A96 D22 P32

INVENTOR(S): KALIS, R W

PATENT ASSIGNEE(S): (IMPR-N) IMPRA INC

COUNTRY COUNT: 19

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9510247	A1	19950420	(199521)*	EN	27
AU 9479785	A	19950504	(199536)		
EP 750481	A1	19970102	(199706)	EN	

R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

US 5609624 A 19970311 (199716) 7

Searcher : Shears 308-4994

09/510937

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9510247	A1	WO 1994-US11647	19941007
AU 9479785	A	AU 1994-79785	19941007
EP 750481	A1	EP 1994-930761	19941007
		WO 1994-US11647	19941007
US 5609624	A	US 1993-134072	19931008

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9479785	A Based on	WO 9510247
EP 750481	A1 Based on	WO 9510247

PRIORITY APPLN. INFO: US 1993-134072 19931008

AN 1995-161533 [21] WPIDS

AB WO 9510247 A UPAB: 19950602

Microporous, expanded **PTFE** vascular graft (10) is provided with one or more integral reinforcing ribs (14), whose **porosity** is substantially the same as that of the **tubular** graft wall (12). Graft (12) is formed by ram extruding a **PTFE** billet through an extrusion die (14), whose **tubular** die exit (42) is provided with one or more grooves (40) that form continuous longitudinal reinforcing ribs (14) along **tubular** body (12). The extrudate is expanded by known means to create a microporous structure. During expansion, the extrudate is twisted on its axis so that ribs (14) become disposed in a helical manner. In this form, the extrudate is restrained against shrinkage and is sintered in known manner to form a **tubular** vascular graft with integral helical reinforcing ribs.

ADVANTAGE - The reinforcing ribs are integral with the **tubular** graft and have substantially the same **porosity**.

Dwg.4/9

ABEQ US 5609624 A UPAB: 19970417

A flexible, monolithic, polymer **tube**, comprises:

a microporous expanded **polytetrafluoroethylene** **tubular** member having a microstructure of nodes interconnected by **fibrils** and having an inner wall diameter and an outer wall diameter, and

at least one microporous expanded **polytetrafluoroethylene** external rib member projecting outwardly from the outer wall diameter, the at least one expanded **polyt trafluoroethylene** external rib member being integral

Searcher : Shears 308-4994

09/510937

with the microporous expanded **polytetrafluoroethylene tubular** member, said microporous expanded **polytetrafluoroethylene tubular** member and said at least one expanded **polytetrafluoroethylene** external rib member having substantially equal **porosities**.
Dwg.1/8

L33 ANSWER 24 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1995-098826 [13] WPIDS
DOC. NO. NON-CPI: N1995-077973
DOC. NO. CPI: C1995-045021
TITLE: **Thin walled plastic tube** used e.g. in medical applications - made from two or more layers of expanded **poly tetra fluoroethylene** film, with or without reinforcement..
DERWENT CLASS: A14 A32 A96 Q67
INVENTOR(S): CAMPBELL, C V; GOFFENA, D G M; LEWIS, J D; MYERS, V J; SPARLING, C M; MYERS, D J
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 46
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

WO 9505555	A1	19950223	(199513)*	EN	42
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB HU JP KP KR KZ					
LK LU LV MG MN MW NL NO NZ PL PT RO RU SD SE SK UA UZ VN					
AU 9476357	A	19950314	(199525)		
EP 714487	A1	19960605	(199627)	EN	
R: DE FR GB IT SE					
JP 09501759	W	19970218	(199717)		42
EP 714487	B1	19980422	(199820)	EN	28
R: DE FR GB IT SE					
DE 69409814	E	19980528	(199827)		
US 5972441	A	19991026	(199952)		
US 5976650	A	19991102	(199953)		
US 6025044	A	20000215	(200016)		
US 6027779	A	20000222	(200017)		
US 6027811	A	20000222	(200017)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

WO 9505555	A1	WO 1994-US9449	19940818
AU 9476357	A	AU 1994-76357	19940818
EP 714487	A1	EP 1994-926553	19940818
Searcher : Shears 308-4994			

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JP 09501759	W		WO 1994-US9449	19940818
			WO 1994-US9449	19940818
			JP 1995-507204	19940818
EP 714487	B1		EP 1994-926553	19940818
			WO 1994-US9449	19940818
DE 69409814	E		DE 1994-609814	19940818
			EP 1994-926553	19940818
			WO 1994-US9449	19940818
US 5972441	A	CIP of	US 1993-108963	19930818
		Div ex	US 1994-204708	19940302
		Cont of	US 1995-486122	19950607
			US 1997-804851	19970224
US 5976650	A	Div ex	US 1993-108963	19930818
			US 1995-486123	19950607
US 6025044	A	CIP of	US 1993-108963	19930818
			US 1994-204708	19940302
US 6027779	A	CIP of	US 1993-108963	19930818
		CIP of	US 1994-204708	19940302
			US 1994-247960	19940524
US 6027811	A	Div ex	US 1993-108963	19930818
			US 1995-486124	19950607

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9476357	A Based on	WO 9505555
EP 714487	A1 Based on	WO 9505555
JP 09501759	W Based on	WO 9505555
EP 714487	B1 Based on	WO 9505555
DE 69409814	E Based on	EP 714487
	Based on	WO 9505555

PRIORITY APPLN. INFO: US 1994-247960 19940524; US 1993-108963
19930818; US 1994-204708 19940302; US
1995-486122 19950607; US 1997-804851
19970224; US 1995-486123 19950607; US
1995-486124 19950607

AN 1995-098826 [13] WPIDS

AB WO 9505555 A UPAB: 19950404

A **thin wall tube** (10) is formed from
two layers (21, 22) of **porous** expanded **PTFE**
film, in which the **fibrils** (13) of the first layer (21)
are oriented parallel to the longitudinal axis of the **tube**
(10), and the **fibrils** (13) of the second layer (22) are
oriented circumferentially.

The layers are pref. joined by fluorinated ethylene-propylene
adhesive, applied discontinuously for a **porous**
tube or continuously for a **non-porous tube**

Searcher : Shears 308-4994

. The layers may be laid up longitudinally or wrapped helically, and may incorporate reinforcing ribs of FEP or PTFE stringers (111).

USE - Used as a coaxial covering for a vascular stent, or for encasing an electrical conductor or fibre optic bundle, as a filter bag, an intraluminal graft, for use with catheters, or a gastroscope, etc..

ADVANTAGE - The tube is collapsible and combines good mechanical strength with lubricity and flexibility.
Dwg.2/20

L33 ANSWER 25 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1995-098639 [13] WPIDS
DOC. NO. NON-CPI: N1995-077884
DOC. NO. CPI: C1995-044887
TITLE: **Thin-walled, porous,**
seamless plastic tube - for use as
intraluminal vascular graft or as covering for
intraluminal stent.
DERWENT CLASS: A14 A32 A96 P34
INVENTOR(S): HOUSE, W D; MOLL, K W; ZUKOWSKI, S L
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 44
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9505277	A1	19950223	(199513)*	EN	19
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB HU JP KP KR KZ					
LK LU MG MN MW NL NO NZ PL PT RO RU SD SE SK UA VN					
AU 9469437	A	19950314	(199525)		
EP 714345	A1	19960605	(199627)	EN	
R: DE FR GB IT SE					
JP 09501585	W	19970218	(199717)		22
US 5620763	A	19970415	(199721)		7
CA 2167943	C	19990817	(199953)	EN	
US 6048484	A	20000411	(200025)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9505277	A1	WO 1994-US4917	19940504
AU 9469437	A	AU 1994-69437	19940504
EP 714345	A1	EP 1994-917911	19940504
		WO 1994-US4917	19940504
JP 09501585	W	WO 1994-US4917	19940504
		JP 1995-506928	19940504

Searcher : Shears 308-4994

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US 5620763	A	Cont of	US 1993-108960	19930818
			US 1995-412840	19950329
CA 2167943	C		CA 1994-2167943	19940504
			WO 1994-US4917	19940504
US 6048484	A	Cont of	US 1993-108960	19930818
		Div ex	US 1995-412840	19950329
			US 1996-749478	19961101

FILING DETAILS:

PATENT NO	KIND	PATENT NO	
AU 9469437	A	Based on	WO 9505277
EP 714345	A1	Based on	WO 9505277
JP 09501585	W	Based on	WO 9505277
CA 2167943	C	Based on	WO 9505277
US 6048484	A	Div ex	US 5620763

PRIORITY APPLN. INFO: US 1993-108960 19930818; US 1995-412840
19950329; US 1996-749478 19961101

AN 1995-098639 [13] WPIDS

AB WO 9505277 A UPAB: 19950404

A seamless **tube** (25) formed by clamping a flat sheet (15) of **porous** expanded **PTFE** between two plates (11, 13) and forcing a male form (23) through an access hole (17) in plate (11) leading to a female form (19) in plate (13), thereby drawing a portion of the **PTFE** sheet (15) into a **tubular** form. This process is carried out under heat, and upon removing the plates (11, 13) the **tube** (256) may be cut from the sheet (15), leaving the tip (27) portion intact for a blind **tube**, or removing it for an open **tube**. The **tube** may have a wall **thickness** ranging from less than 0.1 mm to less than 0.06 mm, preferably about 0.2 mm. Also claimed is a **tube** formed by two **layers** of 0.05 mm thick membrane with a 0.013 thick non-porous layer of fluorinated ethylene propylene therebetween. The **PTFE layers** are oriented with their **fibrils** disposed perpendicularly, and the **tube** formed as hereinbefore described.

USE - For use as an intraluminal vascular graft, or as a covering for an intraluminal stent.

ADVANTAGE - Produces a very **thin walled**, seamless **tube**.

Dwg.2/6

ABEQ US 5620763 A UPAB: 19970522

An article comprising a seamless **tube** of **porous polytetrafluoroethylene** having a wall **thickness** of less than about 0.08 mm and a bulk density less than about

Searcher : Shears 308-4994

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2.0 g/cc is claimed.
Dwg.3a/5

L33 ANSWER 26 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1995-098535 [13] WPIDS
DOC. NO. NON-CPI: N1995-077833
DOC. NO. CPI: C1995-044817
TITLE: **Thin walled** intra-luminal graft
- comprises collapsible **tube** made from
porous expanded plastic film, which may be
introduced by **catheter** delivery methods.
DERWENT CLASS: A96 D22 P32
INVENTOR(S): LEWIS, J D; MYERS, D J
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 44
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9505131	A1	19950223	(199513)*	EN	25
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB HU JP KP KR KZ					
LK LU MG MN MW NL NO NZ PL PT RO RU SD SE SK UA VN					
AU 9469875	A	19950314	(199525)		
EP 714270	A1	19960605	(199627)	EN	
R: DE FR GB IT SE					
JP 09501583	W	19970218	(199717)		26
US 5718973	A	19980217	(199814)		12
US 5993489	A	19991130	(200003)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9505131	A1	WO 1994-US4807	19940504
AU 9469875	A	AU 1994-69875	19940504
EP 714270	A1	EP 1994-918646	19940504
		WO 1994-US4807	19940504
JP 09501583	W	WO 1994-US4807	19940504
		JP 1995-506926	19940504
US 5718973	A Cont of	US 1993-108967	19930818
		US 1995-508213	19950726
US 5993489	A Cont of	US 1993-108967	19930818
	Cont of	US 1995-508213	19950726
		US 1998-24239	19980217

FILING DETAILS:

PATENT NO	KIND	PATENT NO
	Searcher	: Shears 308-4994

AU 9469875	A	Based on	WO 9505131
EP 714270	A1	Based on	WO 9505131
JP 09501583	W	Based on	WO 9505131
US 5993489	A	Cont of	US 5718973

PRIORITY APPLN. INFO: US 1993-108967 19930818; US 1995-508213
19950726; US 1998-24239 19980217

AN 1995-098535 [13] WPIDS

AB WO 9505131 A UPAB: 19950404

A **tubular** intra-luminal graft (50) formed from one or more **layers** of **porous** expanded **PTFE** film (55) having **fibrils** oriented in at least two mutually perpendicular directions. Said **tube** may have a longitudinal seam (51) or a spirally wound seam (63), formed by overlapping the edges of the film (55) and bonding with fluorinated ethylene propylene adhesive. Said **tube** may incorporate one or more reinforcing ribs (111) disposed either longitudinally or helically, inside or outside said **tube**, said ribs being formed from stringers of FEP or **PTFE**.

Also claimed is a **tube** formed from two **layers** of film with reinforcing ribs disposed therebetween. A braid (115) may be substituted for ribs (111). The wall **thickness** of said **tube** is from less than 0.1 **mm** to 0.06 **mm**.

USE - For use as a lining for blood vessels or other body conduits.

ADVANTAGE - A **tube** having good hoop strength which may be collapsed and introduced by means of a **catheter** delivery system, a less traumatic procedure than invasive surgery.

Dwg.5/14

ABEQ US 5718973 A UPAB: 19980406

A **tubular** intra-luminal graft (50) formed from one or more **layers** of **porous** expanded **PTFE** film (55) having **fibrils** oriented in at least two mutually perpendicular directions. Said **tube** may have a longitudinal seam (51) or a spirally wound seam (63), formed by overlapping the edges of the film (55) and bonding with fluorinated ethylene propylene adhesive. Said **tube** may incorporate one or more reinforcing ribs (111) disposed either longitudinally or helically, inside or outside said **tube**, said ribs being formed from stringers of FEP or **PTFE**.

Also claimed is a **tube** formed from two **layers** of film with reinforcing ribs disposed therebetween. A braid (115) may be substituted for ribs (111). The wall **thickness** of said **tube** is from less than 0.1 ~~mm~~ to 0.06 ~~mm~~.

USE - For use as a lining for blood vessels or other body conduits.

Searcher : Shears 308-4994

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ADVANTAGE - A **tube** having good hoop strength which may be collapsed and introduced by means of a **catheter** delivery system, a less traumatic procedure than invasive surgery.
Dwg.5/10

L33 ANSWER 27 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1995-269953 [36] WPIDS
DOC. NO. NON-CPI: N1995-207655
DOC. NO. CPI: C1995-122352
TITLE: Prod. of socket for prosthetic tooth, etc. - using
insert with **poly-tetra**
fluoro-ethylene or polyurethane
collar.
DERWENT CLASS: A96 D21 P32 P34
INVENTOR(S): STECHMESSER, G
PATENT ASSIGNEE(S): (PLAT-I) PLATH M; (STEC-I) STECHMESSER G
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 4402776	A1	19950803	(199536)*		7

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 4402776	A1	DE 1994-4402776	19940127

PRIORITY APPLN. INFO: DE 1994-4402776 19940127

AN 1995-269953 [36] WPIDS

AB DE 4402776 A UPAB: 19950918

Prod. of a socket for long-term insertion of an implant whose functional region is intended to be exposed on a body surface (esp. a prosthetic tooth) comprises: (a) fabrication an 'implant body' (esp. **tube** adapted to receive implant) having a section A intended to be exposed on the body surface and a section B intended to contact subcutaneous connective tissue, where section A is covered with a biologically inert film and section B is coated with a **layer** of bone cement to which an up to 1 **mm**. **thick** collar of Gore-Tex **poly-tetra-fluoro-ethylene** or porous polyurethane is fixed during hardening; (b) inserting the 'implant body' into the 'implant bed' (esp. jaw bone) so that section A projects no more than 1 **mm**. from the body surface; (c) allowing a skin of soft tissue to grow over section A for at least 4 weeks; and (d) making an opening in the skin (for insertion of the implant).

ADVANTAGE - Risk of infection is minimised

Searcher : Shears 308-4994

09/510937

Dwg.1/1

L33 ANSWER 28 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1994-217565 [26] WPIDS
DOC. NO. NON-CPI: N1994-171861
DOC. NO. CPI: C1994-098953
TITLE: Implantable lead for cardiac pacemaker or
defibrillator - having helically coiled electrical
wire covered by insulating layer of impervious
plastic and external covering of biocompatible
porous PTFE.
DERWENT CLASS: A85 A96 P34 S05
INVENTOR(S): MYERS, D J; WILLIAMS, J M
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 19
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9413358	A1	19940623	(199426)*	EN	24
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: CA DE GB JP					
US 5358516	A	19941025	(199442)		12
EP 678044	A1	19951025	(199547)	EN	
R: DE FR GB IT SE					
JP 08504341	W	19960514	(199646)		28
EP 678044	B1	19980422	(199820)	EN	15
R: DE FR GB IT SE					
DE 69318183	E	19980528	(199827)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9413358	A1	WO 1993-US7085	19930728
US 5358516	A	US 1992-988998	19921211
EP 678044	A1	EP 1993-918450	19930728
		WO 1993-US7085	19930728
JP 08504341	W	WO 1993-US7085	19930728
		JP 1994-514120	19930728
EP 678044	B1	EP 1993-918450	19930728
		WO 1993-US7085	19930728
DE 69318183	E	DE 1993-618183	19930728
		EP 1993-918450	19930728
		WO 1993-US7085	19930728

FILING DETAILS:

PATENT NO	KIND	PATENT NO
		Searcher : Shears 308-4994

EP 678044	A1 Based on	WO 9413358
JP 08504341	W Based on	WO 9413358
EP 678044	B1 Based on	WO 9413358
DE 69318183	E Based on	EP 678044
	Based on	WO 9413358

PRIORITY APPLN. INFO: US 1992-988998 19921211

AN 1994-217565 [26] WPIDS

AB WO 9413358 A UPAB: 19940817

Implantable lead (10) comprises at least one electrical conductor wire (11) having a layer of impervious plastic insulation (17,19) tubularly and coaxially surrounding it and an exterior coaxial covering of **porous polytetrafluoroethylene** (21).

The electrical conductor wire is helically wound and has a second layer of plastic insulation (13) covering its surface. The impervious plastic insulation is silicone **tubing** or thermoplastic fluoropolymer. The exterior coaxial covering of **porous PTFE** has a microstructure of nodes interconnected by **fibrils** longer than 4 microns, pref. longer than 10 microns. The impervious plastic insulation is esp. a laminated film of **porous PTFE** and non-**porous** thermoplastic fluoropolymer. The fluoropolymer is esp. ethylene-tetrafluoroethylene copolymer, fluorinated ethylene propylene, or perfluoroalkoxy resin.

USE/ADVANTAGE - Implantable lead is for use with implantable devices such as cardiac pacemakers, defibrillators, and other electrotherapy applications. The **porous PTFE** external surface of the lead has excellent biocompatibility and excellent flexibility. The layer of impervious plastic between it and the electrical wire prevents body fluids from contacting the wire.

Dwg.2/7

ABEQ US 5358516 A UPAB: 19941212

An implantable lead has an electrical conductor wire (89) surrounded by impervious plastic insulation (12) and a coaxial outer covering (21) of **porous PTFE**. The wire is helically wound and the insulation may be a laminated film with a **porous PTFE** layer facing the wire and an outer non-**porous** thermoplastic fluorocarbon polymer layer.

Alternatively, the insulation may be silicone **tubing** and the covering may be of the laminated film but with the **porous** layer facing outwardly. The fluorocarbon polymer is pref. ethylene-tetrafluoroethylene copolymer, fluorinated ethylenepropylene copolymer or perfluoroalkoxy resin.

USE - E.g. for a cardiac pacemaker or defibrillator or for other electrotherapy applications.

Dwg.1/7

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L33 ANSWER 29 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1994-135260 [16] WPIDS
DOC. NO. NON-CPI: N1994-106315
DOC. NO. CPI: C1994-062545
TITLE: Electrical lead for cardiac pacemakers,
defibrillators - has conductors covered with inner
insulating elastomer layer and outer porous
PTFE layer...
DERWENT CLASS: A96 P34 S05
INVENTOR(S): SOUKUP, T M; STALEY, R A
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 19
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9407565	A1	19940414	(199416)*	EN	16
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: CA DE GB JP SE					
FR 2696347	A1	19940408	(199417)		14
EP 662853	A1	19950719	(199533)	EN	
R: DE FR GB IT SE					
US 5466252	A	19951114	(199551)		7
JP 08501963	W	19960305	(199644)		18
EP 662853	B1	19971119	(199751)	EN	8
R: DE FR GB IT SE					
DE 69223264	E	19980102	(199806)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9407565	A1	WO 1992-US10675	19921214
FR 2696347	A1	FR 1993-11107	19930917
EP 662853	A1	WO 1992-US10675	19921214
		EP 1993-901387	19921214
US 5466252	A	US 1992-955611	19921002
JP 08501963	W	WO 1992-US10675	19921214
		JP 1994-508985	19921214
EP 662853	B1	WO 1992-US10675	19921214
		EP 1993-901387	19921214
DE 69223264	E	DE 1992-623264	19921214
		WO 1992-US10675	19921214
		EP 1993-901387	19921214

FILING DETAILS:

PATENT NO	KIND	PATENT NO

Searcher : Shears 308-4994		

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EP 662853	A1 Based on	WO 9407565
JP 08501963	W Based on	WO 9407565
EP 662853	B1 Based on	WO 9407565
DE 69223264	E Based on	EP 662853
	Based on	WO 9407565

PRIORITY APPLN. INFO: US 1992-955611 19921002

AN 1994-135260 [16] WPIDS

AB WO 9407565 A UPAB: 19940608

Implantable lead has at least one helically wound electrical conductor (12), a **tubular** covering of elastomeric polymer (14) coaxially covering the conductor(s) and an exterior **tubular** covering of **porous PTFE** (16) having a microstructure of nodes (24) interconnected with **fibrils** (22).

Pref., the elastomeric polymer is silicone or polyurethane and the **PTFE** layer is partially adhered to it by silicone adhesive. Pref. the **PTFE** layer is elastically stretchable and recoverable by at least 1.5 times its relaxed length.

USE/ADVANTAGE - Electrical lead for cardiac pacemakers, defibrillators and other implantable electrical devices. Inner elastomer layer provides good electrical insulation and **PTFE** layer is biocompatible.

Dwg.3/3

ABEQ US 5466252 A UPAB: 19951221

An implantable lead comprises a helically wound electrical conductor, a **tubular** covering of an elastomeric polymer having a length, the **tubular** covering coaxially surrounding the wound electrical conductor, in which the **tubular** covering is impervious to body fluids; and an exterior **tubular** covering of **porous PTFE** having a length and having a microstructure of nodes interconnected by **fibrils**, in which the exterior **tubular** covering of **porous PTFE** coaxially surrounds the **tubular** covering of an elastomeric polymer, and in which the exterior covering of **porous PTFE** is previous to body fluids.

USE/ADVANTAGE - For use with cardiac pacemakers. The lead has improved tensile strength, high flexibility improved insulating characteristics, high biocompatibility and controlled amts. of elongation during the application of tension.

Dwg.0/3

ABEQ EP 662853 B UPAB: 19971222

An implantable lead (10) comprising at least one helically wound electrical conductor (12) and an exterior **tubular** covering of **porous polytetrafluoroethylene** (16), characterised in that the implantable lead (10) has a **tubular** covering of an elastomeric polymer (14) coaxially covering the at least one helically wound electrical conductor (12).

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and the exterior tubular covering of porous
polytetrafluoroethylene (16) has a microstructure of nodes
(24) interconnected by fibrils (26).

Dwg.3/3

L33 ANSWER 30 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1994-065634 [08] WPIDS
DOC. NO. CPI: C1994-029474
TITLE: Porous poly tetra
fluoroethylene material comprising
PTFE and a heat-meltable resin - having
excellent buckling resistance on bending and
tearing and useful as a medical treatment material.
DERWENT CLASS: A14 A96 D22 H06 J01 L03
INVENTOR(S): ONOGI, H; TANAKA, O; YAMAMOTO, K
PATENT ASSIGNEE(S): (DAIK) DAIKIN IND LTD
COUNTRY COUNT: 18
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9403531	A1	19940217	(199408)*	JA	25
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: JP US					
EP 613921	A1	19940907	(199434)	EN	13
R: DE FR GB					
JP 06505176	X	19940804	(199435)		
EP 613921	A4	19940928	(199534)		
US 5688836	A	19971118	(199801)		10
EP 613921	B1	19991117	(199953)	EN	
R: DE FR GB					
DE 69327041	E	19991223	(200006)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9403531	A1	WO 1993-JP1051	19930727
EP 613921	A1	EP 1993-916228	19930727
		WO 1993-JP1051	19930727
JP 06505176	X	WO 1993-JP1051	19930727
		JP 1994-505176	19930727
EP 613921	A4	EP 1993-916228	
US 5688836	A	WO 1993-JP1051	19930727
		US 1994-211056	19940325
EP 613921	B1	EP 1993-916228	19930727
		WO 1993-JP1051	19930727
DE 69327041	E	DE 1993-627041	19930727
		EP 1993-916228	19930727

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WO 1993-JP1051 19930727

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 613921	A1 Based on	WO 9403531
JP 06505176	X Based on	WO 9403531
US 5688836	A Based on	WO 9403531
EP 613921	B1 Based on	WO 9403531
DE 69327041	E Based on	EP 613921
	Based on	WO 9403531

PRIORITY APPLN. INFO: JP 1992-203552 19920730

AN 1994-065634 [08] WPIDS

AB WO 9403531 A UPAB: 19940407

A porous polytetrafluoroethylene (PTFE

) material is composed of a fibril part mainly comprising PTFE and a node comprising a heat-meltable resin having a mp lower than that of PTFE.

Pref., preparation of the PTFE material comprises: extrusion-moulding a powder comprising PTFE particles, obtained by emulsion-polymerisation of PTFE optionally followed by rolling to give an unsintered material, and particles of a heat-meltable resin having a mp lower than that of PTFE, stretching at a temp. lower than the mp of the heat-meltable resin, and subjecting to heat-treatment at a temp higher than the mp of PTFE.

USE/ADVANTAGE - The PTFE material is useful in medical treatment and for seals and esp. for medical treatment tubes such as artificial blood tubes and for artificial organisms. The material can be used as a separating tube for separating water-drops and dust from the exhaust sensors of automobiles. It is also used as a material for cable insulators and as a seal for gases and liquids. The PTFE material has an improved bondability and is free from the problem of buckling resistance on bending and tearing in the axial direction of the tube.

Dwg.0/7

ABEQ US 5688836 A UPAB: 19980107

A porous polytetrafluoroethylene (PTFE

) material is composed of a fibril part mainly comprising PTFE and a node comprising a heat-meltable resin having a mp lower than that of PTFE.

Pref., preparation of the PTFE material comprises: extrusion-moulding a powder comprising PTFE particles, obtained by emulsion-polymerisation of PTFE optionally followed by rolling to give an unsintered material, and particles of a heat-meltable resin having a mp lower than that of PTFE,

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stretching at a temp. lower than the mp of the heat-meltable resin, and subjecting to heat-treatment at a temp higher than the mp of **PTFE**.

USE/ADVANTAGE - The **PTFE** material is useful in medical treatment and for seals and esp. for medical treatment **tubes** such as artificial blood **tubes** and for artificial organisms. The material can be used as a separating **tube** for separating water-drops and dust from the exhaust sensors of automobiles. It is also used as a material for cable insulators and as a seal for gases and liquids. The **PTFE** material has an improved bondability and is free from the problem of buckling resistance on bending and tearing in the axial direction of the **tube**.

Dwg.3/8

L33 ANSWER 31 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1994-028395 [04] WPIDS
DOC. NO. NON-CPI: N1994-022036
DOC. NO. CPI: C1994-012973
TITLE: Pyrotechnic sheet material, for vehicle occupant safety restraint systems - comprises **porous** polymeric film substrate eg **PTFE** and oxidisable material eg magnesium.
DERWENT CLASS: A94 K04 P73 Q17
INVENTOR(S): CHAN, S K; GRAHAM, S J; LEIPER, G A; KWAN, C S
PATENT ASSIGNEE(S): (ICIL) ICI CANADA INC; (ICIL) IMPERIAL CHEM IND PLC; (CHAN-I) CHAN S K
COUNTRY COUNT: 13
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2269379	A	19940209	(199404)*		
EP 584922	A2	19940302	(199409)	EN	5
R: BE DE ES FR GB IT SE					
AU 9344490	A	19940210	(199411)		
CA 2101624	A	19940207	(199417)		
JP 06172077	A	19940621	(199429)		5
ZA 9305321	A	19940727	(199431)		13
EP 584922	A3	19941109	(199535)		
AU 661786	B	19950803	(199539)		
US 5518807	A	19960521	(199626)		5
EP 584922	B1	19961106	(199649)	EN	7
R: BE DE ES FR GB IT SE					
DE 69305806	E	19961212	(199704)		
ES 2095012	T3	19970201	(199712)		
MX 186358	B	19971010	(199901)		

APPLICATION DETAILS:

Searcher : Shears 308-4994

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PATENT NO	KIND	APPLICATION	DATE
GB 2269379	A	GB 1993-14576	19930714
EP 584922	A2	EP 1993-305521	19930714
AU 9344490	A	AU 1993-44490	19930805
CA 2101624	A	CA 1993-2101624	19930729
JP 06172077	A	JP 1993-192187	19930803
ZA 9305321	A	ZA 1993-5321	19930722
EP 584922	A3	EP 1993-305521	19930714
AU 661786	B	AU 1993-44490	19930805
US 5518807	A	US 1993-102779	19930806
EP 584922	B1	EP 1993-305521	19930714
DE 69305806	E	DE 1993-605806	19930714
		EP 1993-305521	19930714
ES 2095012	T3	EP 1993-305521	19930714
MX 186358	B	MX 1993-4751	19930805

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 661786	B Previous Publ.	AU 9344490
DE 69305806	E Based on	EP 584922
ES 2095012	T3 Based on	EP 584922

PRIORITY APPLN. INFO: GB 1992-16720 19920806

AN 1994-028395 [04] WPIDS

AB GB 2269379 A UPAB: 19940608

A pyrotechnic sheet material (I) (10) comprises a substrate (11) of an oxidising polymeric film (II) having (i) at least a portion of a surface layer (12, 13) which is **porous** (III); and (ii) a layer of oxidisable material (IV) on at least (III) (II) and (IV) are capable of reacting together exothermically on ignition. % Also claimed is the prepn. of (I) by depositing (IV) on at least (III).

Pref. (III) comprises interconnecting pores and is pref. vapour-permeable. Pref. the pores comprise partially, an incendiary material (Na azide). (III) may comprise a microporous structure. Pref. of nodes and **fibrils** of polymer. The specific surface of (III) is at least 1.5 (more than 10) times that of a solid polymeric film of the same dimensions. (II) may contain chemically bound atoms from halogens, oxygen, sulphur, nitrogen, and phosphorus. Esp. (II) comprises a fluoropolymer from e.g. **PTFE**, polychlorotrifluoroethylene, copolymers of hexafluoropropylene and tetrafluoroethylene, copolymers of trichloroethylene and vinylidene and mixts. of two or more such polymers (13 components given) (II) has a **porosity** of 5-90 (70-90) %.

USE/ADVANTAGE - (I) is used in vehicle occupant safety

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restraint systems (claimed) and is also used in e.g. gas generators, rocket motors and shock wave transmission **tubes**. (I) is provided having an enhanced reaction rate and consequently enhanced rate and violence of burning and enhanced rate of energy release.

Dwg.1/1

ABEQ US 5518807 A UPAB: 19960705

A pyrotechnic sheet material comprising a substrate of oxidizing polymeric film having at least a portion of a surface layer which comprises interconnecting pores and is vapour permeable and having a **porosity** of 5-90 % based on total vol. of the **porous** portion occupied by pores and having a vapour-deposited layer of oxidisable metal selected from the gp. consisting of lithium, sodium, magnesium, beryllium, calcium, strontium, barium, aluminum, titanium, zirconium and alloys of it on at least a **porous** portion of the polymer layer, at least part of the oxidisable metal being accommodated within interconnecting pores of the polymeric film and the ratio of the polymeric film and the oxidisable metal at the **porous** portion being such that the metal and the film are conjointly capable of sustained exothermic reaction on ignition.

Dwg.1/1

ABEQ EP 584922 B UPAB: 19961205

A pyrotechnic sheet material (10) comprising a substrate of oxidizing polymeric film (11) having a vapour-deposited layer of oxidisable metallic material (14, 15) on at least a portion of the surface of the polymeric film (11), the polymeric film and the oxidisable material at the surface portion being conjointly capable of reacting together exothermically on ignition, characterised in that at least part of the surface portion of the oxidizing polymeric film (11) comprises interconnecting pores and is vapour-permeable, and at least part of the oxidisable material is accommodated within the interconnecting pores.

Dwg.1/1

L33 ANSWER 32 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1994-287034 [36] WPIDS

DOC. NO. NON-CPI: N1994-226025

DOC. NO. CPI: C1994-130934

TITLE: Flexible **tube** partic. for endoscopes, **catheters** and forceps - has **porous**

expanded **PTFE** substrate with fluoro silicone rubber in voids and non-**porous** fluorosilicate rubber and **PTFE** surface..

DERWENT CLASS: A14 A26 A32 A96 P34

INVENTOR(S): FUJIE, T; NOMI, H; SUZUKI, A; YOSHIDA, M

PATENT ASSIGNEE(S): (NIGO) JAPAN GORE TEX INC; (OLYU) OLYMPUS OPTICAL CO LTD

COUNTRY COUNT: 7

PATENT INFORMATION:

Searcher : Shears 308-4994

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PATENT NO	KIND	DATE	WEEK	LA	PG
EP 615832	A1	19940921	(199436)*	EN	14
R: DE FR GB IT SE					
JP 06270301	A	19940927	(199443)		10
US 5529820	A	19960625	(199631)		11
EP 615832	B1	19980715	(199832)	EN	
R: DE FR GB IT SE					
DE 69411611	E	19980820	(199839)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 615832	A1	EP 1994-301932	19940317
JP 06270301	A	JP 1993-84017	19930317
US 5529820	A	US 1994-214332	19940316
EP 615832	B1	EP 1994-301932	19940317
DE 69411611	E	DE 1994-611611	19940317
		EP 1994-301932	19940317

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69411611	E Based on	EP 615832

PRIORITY APPLN. INFO: JP 1993-84017 19930317

AN 1994-287034 [36] WPIDS

AB EP 615832 A UPAB: 19941102

Flexible **tube** has a non-porous luminal surface (19) of silicone rubber and PTFE and a tubular porous expanded PTFE substrate (10) with a microstructure of nodes interconnected by fibrils with voids in between. At least some of the voids (15, 17) are filled with silicone rubber (21).

Also claimed are a method of making the **tube** and endoscopic appts. using the **tube**.

Pref. the silicone rubber is fluorosilicone rubber.

USE - Flexible **tube** for use as endoscope channel **tube** (claimed), forceps channel **tube**, bodily fluid transport **tube**, catheter **tube** and transporting liquids. or a gas after it has been destructively tested.

ADVANTAGE - **Tube** has excellent lubricity, resistance to contamination and chemicals and is very flexible.

Dwg.1/5

ABEQ US 5529820 A UPAB: 19960808

A flexible **tube** comprising a tubular substrate

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of porous expanded polytetrafluoroethylene having a microstructure of nodes interconnected by fibrils and having void spaces between fibrils, the tube having an outer surface and a luminal surface, where the void spaces adjacent to the luminal surface are filled with silicone rubber such that the luminal surface comprises a non-porous surface of polytetrafluoroethylene and silicone rubber where a continuous coat of the silicone rubber is not present on the luminal surface of the tube, and where the void spaces adjacent to the outer surface are open.

Dwg.1/5

L33 ANSWER 33 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 ACCESSION NUMBER: 1993-368896 [46] WPIDS
 CROSS REFERENCE: 1997-318689 [29]
 DOC. NO. NON-CPI: N1993-284685
 DOC. NO. CPI: C1993-163788
 TITLE: Mechanical push-pull cable partic. useful in bicycle gear shifting - comprises steel wire core bonded with fluoro polymer adhesive to porous PTFE layer.
 DERWENT CLASS: A88 Q23 Q62
 INVENTOR(S): DAVIDSON, D; JOHNSON, J L; MYERS, D J; PERKO, V L; DAVIDSON, D F
 PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
 COUNTRY COUNT: 16
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9322570	A1	19931111	(199346)*	EN	24
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL SE					
W: CA DE GB JP					
FR 2692013	A1	19931210	(199402)		25
EP 640188	A1	19950301	(199513)	EN	
R: DE FR GB IT SE					
JP 07506170	W	19950706	(199535)		11
EP 640188	B1	19980513	(199823)	EN	13
R: DE FR GB IT SE					
DE 69225502	E	19980618	(199830)		
CA 2132703	C	19990316	(199929)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9322570	A1	WO 1992-US4681	19920604
FR 2692013	A1	FR 1993-4112	19930407
EP 640188	A1	EP 1992-914219	19920604
Searcher : Shears 308-4994			

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JP 07506170	W	WO 1992-US4681	19920604
		WO 1992-US4681	19920604
		JP 1993-519212	19920604
EP 640188	B1	EP 1992-914219	19920604
		WO 1992-US4681	19920604
DE 69225502	E	DE 1992-625502	19920604
		EP 1992-914219	19920604
		WO 1992-US4681	19920604
CA 2132703	C	CA 1992-2132703	19920604

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 640188	A1 Based on	WO 9322570
JP 07506170	W Based on	WO 9322570
EP 640188	B1 Based on	WO 9322570
DE 69225502	E Based on	EP 640188
	Based on	WO 9322570

PRIORITY APPLN. INFO: US 1992-878805 19920504

AN 1993-368896 [46] WPIDS

CR 1997-318689 [29]

AB WO 9322570 A UPAB: 19970723

A mechanical push-pull cable comprises (1) a steel wire core; (2) a layer of fluoropolymer adhesive covering (1); and (3) an outer layer of **PTFE** covering (2).

Pref. the combined thickness of (2) and (3) is less than 0.25mm, and (1) is a multiply stranded steel wire. (2) is pref. fluorinated ethylene propylene or perfluoro(alkoxy ethylene)-tetrafluoroethylene copolymer, and has a smooth outer surface with a uniform circular cross-section. (3) is a helically wrapped tape of porous expanded PTFE, opt. impregnated with a graphite filler. The cable may be fitted inside a support **tube** with clearance sufficient to allow the push-pull cable to slide axially within the bore of the support **tube**, and may further comprise contamination seals attached to the **tube** ends. The support **tube** opt. has an inner surface of non-porous **PTFE**.

The mechanical push-pull cable opt. comprises (a) a steel wire core; and (b) a tape outer layer helically wrapped around and covering (a), wherein the tape comprises porous expanded PTFE having a microstructure of nodes interconnected by **fibrils** oriented substantially parallel to the tape length.

USE/ADVANTAGE - The cable is partic. useful in bicycle gearshifting, eg. derailleur gears (claimed), and exhibits low friction, long life span and low maintenance compared to prior art cables.

Dwg.1/6

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L33 ANSWER 34 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1993-303517 [38] WPIDS
CROSS REFERENCE: 1995-263194 [34]; 1999-130331 [11]; 2000-037268
[54]
DOC. NO. NON-CPI: N1993-233322
DOC. NO. CPI: C1993-135263
TITLE: Prod'n. of shaped porous fluoro polymer
article having variable cross-sectional
microstructure - by extruding billet
lubricant-contg. PTFE, removing
lubricant, stretching and sintering, useful in
medical implants.
DERWENT CLASS: A14 A32 A96 D16 J01 P32
INVENTOR(S): HERWECK, S A; KARWOSKI, T; MARTAKOS, P
PATENT ASSIGNEE(S): (ATRI-N) ATRIUM MEDICAL CORP
COUNTRY COUNT: 44
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9318214	A1	19930916	(199338)*	EN	62
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE					
W: AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR KZ LK LU					
MG MN MW NL NO NZ PL PT RO RU SD SE SK UA US VN					
AU 9339203	A	19931005	(199405)		
EP 630432	A1	19941228	(199505)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 07507014	W	19950803	(199539)		17
US 5474824	A	19951212	(199604)		14
EP 630432	A4	19950830	(199618)		
AU 676831	B	19970327	(199721)		
EP 630432	B1	19990714	(199932)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
DE 69325649	E	19990819	(199939)		
ES 2133393	T3	19990916	(199946)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
WO 9318214	A1	WO 1993-US2371	19930312	
AU 9339203	A	AU 1993-39203	19930312	
EP 630432	A1	EP 1993-908354	19930312	
		WO 1993-US2371	19930312	
JP 07507014	W	JP 1993-516054	19930312	
		WO 1993-US2371	19930312	
US 5474824	A	Cont of	US 1992-850862	19920313
			US 1994-268240	19940629

Searcher : Shears 308-4994

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EP 630432	A4	EP 1993-908354	
AU 676831	B	AU 1993-39203	19930312
EP 630432	B1	EP 1993-908354	19930312
		WO 1993-US2371	19930312
DE 69325649	E	DE 1993-625649	19930312
		EP 1993-908354	19930312
		WO 1993-US2371	19930312
ES 2133393	T3	EP 1993-908354	19930312

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9339203	A Based on	WO 9318214
EP 630432	A1 Based on	WO 9318214
JP 07507014	W Based on	WO 9318214
AU 676831	B Previous Publ. Based on	AU 9339203
EP 630432	B1 Based on	WO 9318214
DE 69325649	E Based on Based on	WO 9318214
ES 2133393	T3 Based on	EP 630432

PRIORITY APPLN. INFO: US 1992-850862 19920313; US 1994-268240
19940629

AN 1993-303517 [38] WPIDS

CR 1995-263194 [34]; 1999-130331 [11]; 2000-037268 [54]

AB WO 9318214 A UPAB: 20000118

Prod'n. of a shaped **porous** article comprises: (1) forming a billet of fluoropolymer material, pref. a **PTFE** resin, having a lubricant component that varies along a billet dimension; (2) extruding the billet to form an extruded article having a lubricant component varying in level along a partic. article dimension; (3) removing lubricant and stretching the article to form a **porous** article; and (4) sintering the **porous** article in its stretched state to fix its dimension, with the structure of the sintered **porous** article varying along one dimension.

Also claimed is a vascular prosthesis or implantable article comprising such a **tubular** extruded article.

Pref. the fluoro-polymer is a single-resin fluoro-polymer, pref. **PTFE**, and the article is sintered at the sintering temp. of the fluoro-polymer to sinter the article uniformly. Partic. for the **tube** with biological applications, the fluoro-polymer is a copolymer of TFE and a monomer selected from ethylene, chlorotrifluoroethylene, perfluoroalkoxytetrafluoroethylene and fluorinated propylenes.

USE/ADVANTAGE - The shaped **porous** articles having a homogeneous microstructure along the length but a varying

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microstructure in the cross-section have excellent strength and compression resistance. They are useful in a variety of medical implants and grafts, as filters, and as bioculture reactors.
Dwg.1/8

ABEQ US 5474824 A UPAB: 19960129

An implantable article is formed by a wall of material extending in a thickness dimension from an inner face to an outer face. The wall consists of a single expanded **polytetrafluoroethylene (PTFE)** material having a microstructure of a number of nodes interconnected by **fibrils** extending between the nodes, where internode spaces which formed between pairs of adjacent nodes define oriented microchannels for passage of material along it, and microchannels are tapered and extend along the thickness dimension of the wall.
Dwg.6

L33 ANSWER 35 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1993-404751 [50] WPIDS

DOC. NO. NON-CPI: N1993-313359

DOC. NO. CPI: C1993-179779

TITLE: Two-lumen **catheter** esp. Foley urinary
catheter - has **porous** sheath to
distribute antibacterial agent expelled from
secondary lumen.

DERWENT CLASS: A96 B07 P34

INVENTOR(S): BODICKY, R O

PATENT ASSIGNEE(S): (SHES) SHERWOOD MEDICAL CO

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5269755	A	19931214	(199350)*		12

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5269755	A	US 1992-943850	19920911

PRIORITY APPLN. INFO: US 1992-943850 19920911

AN 1993-404751 [50] WPIDS

AB US 5269755 A UPAB: 19940203

A **catheter** has a main and a secondary lumen from proximal to distal ends. Fluid introduced into the secondary lumen can be discharged to the exterior at a point along the **tube**, and a **porous** member (40) extends along and encircles the **tube** so that the expelled fluid passes through its pores to

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the exterior. The member is made of expanded **PTFE** or silicone polymer.

Pref. **porous** polymer is **PTFE** having nodules and interconnecting **fibrils**. The fluid is expelled through holes or slits in the secondary lumen wall, and the member is secured to the **tube** wall distally of these by adhesive applied to the exterior of **tube** and member and coming into contact through the pores. The adhesive is e.g. silicone or polyurethane.

ADVANTAGE - Allows antibacterial medicaments to be delivered along the **tube** outer surface to reduce the occurrence of hospital-acquired urinary tract infections.

Dwg.2A/7

L33 ANSWER 36 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1993-093303 [11] WPIDS
DOC. NO. NON-CPI: N1993-071460
DOC. NO. CPI: C1993-041218
TITLE: **Porous** poly tetra fluor ethylene plated
with e.g. platinum - obtd. by coating with
cation-exchange resin and immersing in
platinum-amino complex, alkali-metal boro hydride
and chloro platinic acid hexa hydrate with
hydrazine hydrochloride solns.
DERWENT CLASS: A14 A35 A85 J03 J04 L03 M13 P73 S03 V04 X12 X16
INVENTOR(S): KATO, H; OHASHI, K; WANI, T
PATENT ASSIGNEE(S): (NIGO) JAPAN GORE TEX INC; (GORE) GORE & ASSOC INC
W L
COUNTRY COUNT: 6
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5190813	A	19930302	(199311)*		8
EP 579852	A1	19940126	(199404)#	EN	8
	R:	DE FR GB IT SE			
EP 579852	B1	19970702	(199731)#	EN	8
	R:	DE FR GB IT SE			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5190813	A	US 1992-916924	19920720
EP 579852	A1	EP 1992-112455	19920721
EP 579852	B1	EP 1992-112455	19920721

PRIORITY APPLN. INFO: US 1992-916924 19920720
Searcher : Shears 308-4994

09/510937

AN 1993-093303 [11] WPIDS
AB US 5190813 A UPAB: 19931112

Porous polytetrafluoroethylene material comprises: (i) a **porous polytetrafluoroethylene** substrate; (ii) a cation-exchange resin (I) coated onto the inside pore surface of the substrate; and (iii) at least one **layer** of Pt metal or Pt alloy bonded to the cation-exchange resin.

(I) is a pref. copolymer of tetrafluoroethylene and sulphonyl fluoride vinyl ether.

USE/ADVANTAGE - Substrate can be in the form of a **tube**, sheet, yarn or as an insulating **layer** on an electrical wire or cable. Plating can be both-side or one-side such that both or only one side of the substrate is conductive. Uses include electrodes in electrochemical applications and partic. gas diffusion electrodes.

In an example **porous** circular, expanded **polytetrafluoroethylene** film of dia. 50 mm and **thickness** 40 microns and having a **porosity** of 80% was subjected to desorption washing by immersion in acetone for 5 mins. Film was then immersed in a soln. of 2 wt.% 'Nafion'(RTM) in alcohol and heated and dried at 100 deg.C for 1 hr. to cause the cation exchange resin to adhere to the **porous** film. Film was immersed in a methanol soln. and finally in distilled water for 1 hr. to adapt the cation exchange resin making the film hydrophilic; there was no elution of the cation exchange resin. Treated substrate was stored in distilled water and during the plating process the film is kept in a wet state. Plating process comprised the steps of adsorption, reduction and growth

ABEQ EP 579852 B UPAB: 19970731

A **porous polytetrafluoroethylene** material comprising: a **porous polytetrafluoroethylene** substrate, a cation-exchange resin coated on the inside pore surface of the substrate; at least one **layer** of platinum metal or platinum alloy bonded to the cation-exchange resin.
Dwg.0/2

L33 ANSWER 37 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1993-018104 [02] WPIDS
CROSS REFERENCE: 1995-382379 [49]
DOC. NO. CPI: C1993-008291
TITLE: Surface modified **porous** expanded
PTFE - having highly hydrophobic surface
produced by exposure to radio frequency gas plasma
discharge with reactive etching gas.
DERWENT CLASS: A14 A83 A85 A88 A96 D22 F01 J01 P14 P32 P34 P73
INVENTOR(S): ZUKOWSKI, S L; KUZOWSKI, S L
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 17
PATENT INFORMATION:

Searcher : Shears 308-4994

09/510937

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9222604	A1	19921223	(199302)*	EN	23
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL SE					
W: CA DE GB JP					
JP 07500122	W	19950105	(199511)		11
EP 646151	A1	19950405	(199518)	EN	
R: DE FR GB IT SE					
US 5437900	A	19950801	(199536)		21
EP 646151	B1	19971105	(199749)	EN	22
R: DE FR GB IT SE					
DE 69223065	E	19971211	(199804)		
CA 2110499	C	19980623	(199836)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9222604	A1	WO 1992-US4812	19920608
JP 07500122	W	WO 1992-US4812	19920608
		JP 1993-500960	19920608
EP 646151	A1	EP 1992-914071	19920608
		WO 1992-US4812	19920608
US 5437900	A Cont of	US 1991-718324	19910614
		US 1993-161184	19931201
EP 646151	B1	EP 1992-914071	19920608
		WO 1992-US4812	19920608
DE 69223065	E	DE 1992-623065	19920608
		EP 1992-914071	19920608
		WO 1992-US4812	19920608
CA 2110499	C	CA 1992-2110499	19920608

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 07500122	W Based on	WO 9222604
EP 646151	A1 Based on	WO 9222604
EP 646151	B1 Based on	WO 9222604
DE 69223065	E Based on	EP 646151
	Based on	WO 9222604

PRIORITY APPLN. INFO: US 1991-718324 19910614; US 1993-161184
19931201

AN 1993-018104 [02] WPIDS

CR 1995-382379 [49]

AB WO 9222604 A UPAB: 19951215

Porous expanded polytetrafluoroethylene (

Searcher : Shears 308-4994

PTFE), having a microstructure of nodes interconnected by **fibrils**, comprises a 3-D material having surface(s) with a water droplet roll-off angle (WDRA) of less than 10 degs. on a substantial portion.

Also claimed are: (1) **porous expanded PTFE** having such a microstructure, which comprises a 3-D material having a surface(s) wherein at least a substantial portion comprises freestanding node portions with open valleys between them; and (2) a method of modifying such **porous expanded PTFE** surfaces by exposing them to a radio frequency gas plasma discharge with a reactive etching gas until a WDRA of less than 10 degs. is attained or until the **fibrils** are removed and the surface comprises freestanding node portions with open valleys between them.

USE/ADVANTAGE - Surface etching provides **porous expanded PTFE** material with a highly hydrophobic surface, while extended etching results in complete removal of **fibrils** from the surface. The material can be produced with improved bondability, resistance to fluid penetraton or filtration ability and can be used to make waterproof breathable fabrics and biocompatible medical implant

0/20

Dwg.0/20

ABEQ US 5437900 A UPAB: 19950918

Porous expanded polytetrafluoroethylene having a microstructure of nodes interconnected by **fibrils**. the **polytetrafluoroethylene** includes a three-dimensional material having at least one surface where at least a substantial portion is comprised of freestanding node portions with open valleys inbetween.

Pref. the **polytetrafluoroethylene** has a water droplet roll-off cycle of less than 10 deg. and the three dimensional material is in the form of a **tubular** shape.

USE/ADVANTAGE - Used to make water-proof breathable fabrics, medical implants, blood contact materials, filtering materials. The material has enhanced bondability and hydrophobicity.

Dwg.1/13

ABEQ EP 646151 B UPAB: 19971211

Porous expanded polytetrafluoroethylene having a microstructure of nodes interconnected by **fibrils**, comprising a three dimensional material having surfaces and having a water droplet roll-off angle less than 10 degrees on a substantial portion of at least one surface.

Dwg.0/13

L33 ANSWER 38 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1992-433621 [52] WPIDS

DOC. NO. NON-CPI: N1992-330881

DOC. NO. CPI: C1992-192528

TITLE: Expanded **porous PTFE** materials

Searcher : Shears 308-4994

09/510937

useful as waterproof-breathable fabrics - comprises
PTFE polymeric matrix and fluorinated
organic polymer treated with fluorinated organic
polymer.

DERWENT CLASS: A14 A88 D22 F04 P32 Q65
INVENTOR(S): CHUNG, H Y; CHUNG, H
PATENT ASSIGNEE(S): (DOND) DONALDSON CO INC
COUNTRY COUNT: 20
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9221715	A1	19921210	(199252)*	EN	46
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL SE					
W: AU BR CA JP					
AU 9216667	A	19930108	(199315)		
EP 587588	A1	19940323	(199412)	EN	
R: DE FR GB IT SE					
ZA 9203268	A	19940525	(199423)		47
BR 9205929	A	19940927	(199440)		
JP 07501347	W	19950209	(199515)		13
AU 668087	B	19960426	(199624)		
EP 587588	B1	19980708	(199831)	EN	
R: DE FR GB IT SE					
DE 69226183	E	19980813	(199838)		
US 5869156	A	19990209	(199913)		
US 5972449	A	19991026	(199952)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9221715	A1	WO 1992-US3045	19920414
AU 9216667	A	AU 1992-16667	19920414
		WO 1992-US3045	19920414
EP 587588	A1	EP 1992-909581	19920414
		WO 1992-US3045	19920414
ZA 9203268	A	ZA 1992-3268	19920506
BR 9205929	A	BR 1992-5929	19920414
		WO 1992-US3045	19920414
JP 07501347	W	JP 1992-508874	19920414
		WO 1992-US3045	19920414
AU 668087	B	AU 1992-16667	19920414
EP 587588	B1	EP 1992-909581	19920414
		WO 1992-US3045	19920414
DE 69226183	E	DE 1992-626183	19920414
		EP 1992-909581	19920414
		WO 1992-US3045	19920414
US 5869156	A	US 1991-710501	19910604
	Cont of		
	Searcher	: Shears	308-4994

09/510937

		Cont of	US 1994-289172	19940810
			US 1997-852045	19970506
US 5972449	A	Cont of	US 1991-710501	19910604
		Cont of	US 1994-289172	19940810
		Div ex	US 1997-852045	19970506
			US 1999-246594	19990208

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9216667	A	Based on	WO 9221715
EP 587588	A1	Based on	WO 9221715
BR 9205929	A	Based on	WO 9221715
JP 07501347	W	Based on	WO 9221715
AU 668087	B	Previous Publ.	AU 9216667
		Based on	WO 9221715
EP 587588	B1	Based on	WO 9221715
DE 69226183	E	Based on	EP 587588
		Based on	WO 9221715
US 5972449	A	Div ex	US 5869156

PRIORITY APPLN. INFO: US 1991-710501 19910604; US 1994-289172
19940810; US 1997-852045 19970506; US
1999-246594 19990208

AN 1992-433621 [52] WPIDS

AB WO 9221715 A UPAB: 19950126

Porous (I) material comprises a polymeric matrix of a **PTFE** polymer and an effective filtration efficiency enhancing amt. of a fluorinated organic polymer fluid. Material has a microstructure of nodes interconnected by **fibrils**.

Pref. ultrafine filtration enhance efficiency of the material, increasing the efficiency by a multiple of at least 3; Material is pref. in the shape of a film or a **tube** having an inside dia. of 1-40 mm and a wall thickness of 0.3-2mm; and may be configured and arranged for use as a vascular graft. Body of the **porous** material has been expanded in at least one direction to a final length which is at least 3 times, pref. at least 5 times, esp. at least 10 times, most pref. at least 20 times, the original length in that direction. Radiation tolerance of the **porous** material is increased by a multiple of at least 3, pref. at least 3, esp. by at least 10.

USE/ADVANTAGE - Useful as waterproof/breathable fabrics e.g. for raincoats and tents; air filters for vehicles and computer disk drives; liq. filters; liq./liq. sepn. membranes; vascular grafts and mechanical seals e.g. for bushings and O-rings. **Porous** materials have enhanced resistance to degradation by radiation, enhanced fine particle filtration efficiency, the ability to delay the passage of isopropanol, and an increased elongation to breakin

Searcher : Shears 308-4994

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0/3

Dwg.0/3

L33 ANSWER 39 OF 66 JICST-EPlus COPYRIGHT 2000 JST

ACCESSION NUMBER: 920335410 JICST-EPlus

TITLE: Biological Communication through the Wall of
Synthetic Vascular Grafts and the Endothelialization.

AUTHOR: ISHIMA HIROSHI

SAITO MASARU; HORI MOTOKAZU

YAMADA KYOKO; KATAOKA HIROSHI; WATANABE KOJI

KANEKO NORIAKI

SUZUKI TATSUO; KITSUKAKE FUJIO

CORPORATE SOURCE: Saga Prefect. Koseikan Hospital

Univ. of Tsukuba, Inst. of Clinical Medicine

Toray Industries, Inc., Basic Res. Lab.

Ube Industries, Ltd.

Nikkiso Co., Ltd.

SOURCE: Myakkangaku (Journal of Japanese College of
Angiology), (1992) vol. 32, no. 3, pp. 203-207.

Journal Code: Z0216B (Fig. 3, Ref. 4)

ISSN: 0387-1126

PUB. COUNTRY: Japan

DOCUMENT TYPE: Journal; Article

LANGUAGE: Japanese

STATUS: New

AB Intimal healing of three kinds of knitted polyester tube with water porosity of 2000 (A,n=6), 1500 (B,n=3) and 500 (C,n=4), and that of two kinds of ePTFE tube with mean fibril length of 80.MU.m (D,n=10) and 30.MU.m (E,n=3) were investigated by macroscopic, microscopic and electron-microscopic examination about endothelial coverage area(ECA), fibroblasts and smooth muscle cells proliferation(P), neo-capillaries development(N), and proliferated endothelium morphology(M). All grafts that the internal diameter was 5 or 6mm and the length was 4 or 5cm which were implanted in canine carotid regions and they were removed at the third and sixth postoperative months. The mean ratio of ECA were A: 66.6%, B:48.3%, C:22.2%, D:59.2% and E:38.9%. P and N in the matrix of A and D were much better than that of C and E. M of proximal site of A,B, and D were resembled to the normal arterial endothelium. The results suggest that biological communication through the wall of synthetic grafts may be augmented by increased water porosity or fibril length and, therefore, greater biological communication means better intimal healing. (author abst.)

L33 ANSWER 40 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1991-177883 [24] WPIDS

DOC. NO. NON-CPI: N1991-136264

DOC. NO. CPI: C1991-076761

Searcher : Shears 308-4994

09/510937

TITLE: **Catheter** for withdrawing or introducing fluids etc., to body - with a **tubular** portion of low density **porous** PPTe.

DERWENT CLASS: A96 B07 P34

INVENTOR(S): MYERS, D J

PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L

COUNTRY COUNT: 15

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

WO 9107203	A	19910530	(199124)*		
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE					
W: CA JP					

PRIORITY APPLN. INFO.: US 1989-440574 19891122

AN 1991-177883 [24] WPIDS

AB WO 9107203 A UPAB: 19930928

Catheter has a **tubular** portion (1) consisting of **porous PTFE** having a density less than 1.6 gms/cc..

Tubular portion (1) is of **porous** expanded **PTFE** having a mean **fibril** length less than 1 micron, and density less than 1.3 gm/cc; has a connector (2) at one end and a tip portion (3) of greater or less density and/or **fibril** length than the remainder of the **tubular** portion to provide the tip portion with a greater or lower rigidity. The **tubular** portion may contain a shadow forming agent.

USE/ADVANTAGE - Withdrawing or introducing fluid or other medical devices from or into cavities of the body. **Porous PTFE tube** is of adequate rigidity for insertion and use as a **catheter** while having good flexibility to avoid kinking during bending. It is permeable to gases but hydrophobic and resistant to cellular ingrowth.

2/6

L33 ANSWER 41 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1990-361441 [48] WPIDS

DOC. NO. CPI: C1990-157077

TITLE: **Multilayer, porous, composite** membrane of expanded EPTFE - coated with per fluoro ion exchange polymer and used in electrolytic cells and as filtering medium.

DERWENT CLASS: A85 E36 J03 P73

INVENTOR(S): BRANCA, P A; HUBIS, D E; MALLOUK, R S; PERRY, R L; PERRY, R L

PATENT ASSIGNEE(S): (DUPO) DU PONT DE NEMOURS & CO E I; (GORE) GORE & Searcher : Shears 308-4994

09/510937

ASSOC INC W L; (BRAN-I) BRANCA P A

COUNTRY COUNT: 17

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

WO 9013593	A	19901115	(199048)*		
RW: AT BE CH DE DK ES FR GB IT LU NL SE					
W: AU BR CA JP					
AU 9056437	A	19901129	(199109)		
EP 470186	A	19920212	(199207)		
R: DE FR GB IT SE					
US 5094895	A	19920310	(199213)		19
BR 9007328	A	19920421	(199231)		
JP 04507112	W	19921210	(199304)		20
US 5183545	A	19930202	(199308)		20
JP 07103251	B2	19951108	(199549)		21

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

EP 470186	A	EP 1990-907863	19900427
US 5094895	A	US 1990-511110	19900419
BR 9007328	A	BR 1990-7328	19900427
		WO 1990-US2349	19900427
JP 04507112	W	JP 1990-507545	19900427
		WO 1990-US2349	19900427
US 5183545	A CIP of	US 1989-344707	19890428
	Div ex	US 1990-511110	19900419
		US 1991-792665	19911115
JP 07103251	B2	JP 1990-507545	19900427
		WO 1990-US2349	19900427

FILING DETAILS:

PATENT NO	KIND	PATENT NO

BR 9007328	A Based on	WO 9013593
JP 04507112	W Based on	WO 9013593
US 5183545	A Div ex	US 5094895
JP 07103251	B2 Based on	JP 04507112
	Based on	WO 9013593

PRIORITY APPLN. INFO: US 1989-344707 19890428; US 1990-511110
19900419

AN 1990-361441 [48] WPIDS

AB WO 9013593 A UPAB: 19930928

A **multilayer, porous, composite shaped article**

Searcher : Shears 308-4994

(pref. a sheet 0.25 pref. 0.76-5.0mm **thick**, or a **tube 0.25 mm thick**) comprising a multiple **layers of porous** expanded - **PTFE** bonded together, has at least a portion (pref. all) of its exterior and interior pore surfaces coated with a perfluoro ion exchange polymer (excluding 2 wt. % of the composite and pref. perfluoro-sulphonic-carboxylic, mixt. or copolymer, thereof with equiv. wt. less than 1000), with the ratio of TFE - functional comonomer of 1.5:1-5.6:1. The composite article may contain a water soluble surfactant within its pores to assist in initial water penetration.

USE/ADVANTAGE - The liq. permeable composite article is used as a diaphragm in electrolysis cells for the prodn. of halogen and alkali metal hydroxide from an aq. alkali metal halide soln. or as a filtering medium. The **multilayer** EPTFE diaphragms yield an exceptional level of uniformity such that they operate at cell voltages and current efficiencies significantly better than those of prior art. The perfluoro ion exchange coating provides a level of hydrophilicity that prevents gas locking and leads to sustained operation at high current efficiency and low voltage. @

0/4

ABEQ JP 04507112 W UPAB: 19930928

A **multilayer, porous**, composite shaped article (pref. a sheet 0.25 pref. 0.76-5.0mm **thick**, or a **tube 0.25 mm thick**) comprising multiple **layers of porous** expanded - **PTFE** bonded together, has at least a portion (pref. all) of its exterior and interior pore surfaces coated with a perfluoro ion exchange polymer (excluding 2 wt.% of composite and pref. perfluoro-sulphonic-carboxylic, mixt. or copolymer, thereof with equiv. wt. less than 1000), with the ratio of TFE - functional comonomer of 1.5:1-5.6:1. The composite article may contain a water soluble surfactant within its pores to assist in initial water penetration.

USE/ADVANTAGE - Used as a diaphragm in electrolysis cells for the prodn. of halogen and alkali metal hydroxide from JP4507112A - W an aq. alkali metal halide soln. or as a filtering medium. The **multilayer** EPTFE diaphragms yield such uniformity that they operate at cell voltages and current efficiencies significantly better than those of prior art. The perfluoro ion exchange coating provides a level of hydrophilicity that prevents gas locking and leads to sustained operation at high current efficiency and low voltage

ABEQ US 5094895 A UPAB: 19930928

A **multilayer, porous**, composite, shaped article comprising multiple **layers of porous**, expanded **polytetrafluoroethylene** (EPTFE) bonded together is new. The article has at least a portion of its exterior surfaces and at least a portion (pref. substantially all) of its interior pore surfaces coated with a perfluoro ion exchange polymer (pref. a

Searcher : Shears 308-4994

perfluorosulphonic acid or perfluorocarboxylic acid polymer of equivalent wt. less than 100). The article has open, continuous channels therethrough which permit flow of fluids through it.

USE/ADVANTAGE - The composite article is useful as a diaphragm for electrolysis or as a filtering medium.

ABEQ US 5183545 A UPAB: 19930928

The diaphragm (DM) sepg. the anode and cathode compartments in an electrolytic cell consists of several **layers** of **porous**, expanded **PTFE layers** bonded together. At least a portion of the exterior surfaces and of the interior pore surfaces of the DM is coated with a perfluoro ion exchange resin, pref. a homopolymer of perfluorosulphonic acid or perfluorocarboxylic acid or a copolymer of these acids, each polymer having an equiv. wt. below 1,000.

Pref., at least 2 **layers** of the DM have specific gravity differing by at least 5%, esp. by at least 10% and the **layer** with the higher specific gravity faces the cathode. Pref. a number of composite DM are used to separate the components. The DM contains a surfactant in its pores.

USE/ADVANTAGE - For the prodn. of H₂ and alkali metal hydroxide from an aq. soln. of an alkali metal halide. A very uniform DM is provided allowing the cell to operate at better voltages and current efficiencies than known ones. The DM can also be used as highly effective filter material

0/5

L33 ANSWER 42 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 ACCESSION NUMBER: 1990-209636 [27] WPIDS
 DOC. NO. NON-CPI: N1990-162925
 DOC. NO. CPI: C1990-090556
 TITLE: Heat **catheter** used to form blood vessel shadows - comprising non-**porous PTFE tube** with tip portion of **porous PTFE**.
 DERWENT CLASS: A14 A96 B07 P34
 INVENTOR(S): HAMAZAKI, S; MOTODA, A
 PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L; (NIGO) JAPAN GORE TEX INC
 COUNTRY COUNT: 13
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9006150	A	19900614	(199027)*		
RW: AT BE CH DE ES FR GB IT LI NL SE					
W: AU					
JP 02142576	A	19900531	(199028)		
AU 8946617	A	19900626	(199038)		

Searcher : Shears 308-4994

PRIORITY APPLN. INFO: JP 1988-293654 19881125

AN 1990-209636 [27] WPIDS

AB WO 9006150 A UPAB: 19941115

Catheter has a **tube** (1) of non-porous **PTFE** with an integrally connected tip (2) of porous **PTFE**. The **fibril** length of the porous section can be less than 20 microns and pref. less than 5. A shadow forming agent can be provided. The **porous catheter** part can be formed by heating and expanding and/or sintering a nonporous **PTFE tube** or by shielding a portion of a **porous tube** and heating the rest to make it non-porous.

USE/ADVANTAGE - Heart **catheter** used to form blood vessel shadows, to measure blood flow and extract fluids. The **porous** tip is more flexible and less likely to damage the blood vessels. @ (11pp Dwg.No.1/4)@
1/4

L33 ANSWER 43 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1990-297347 [39] WPIDS

DOC. NO. NON-CPI: N1990-228584

DOC. NO. CPI: C1990-128455

TITLE: Longitudinally compliant vascular graft - comprises **porous PTFE tube**

longitudinally compressed and coated with a biocompatible elastomer.

DERWENT CLASS: A14 A32 A96 D22 P32

INVENTOR(S): COLONE, W M; DELLACORNA, L V; FARNAN, R C; KOWLIGI, R R; DELLA, CORNA L V

PATENT ASSIGNEE(S): (IMPR-N) IMPRA INC; (CORN-I) DELLA CORNA L V

COUNTRY COUNT: 15

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 4955899	A	19900911	(199039)*		
WO 9014055	A	19901129	(199050)		
RW: AT BE CH DE DK ES FR GB IT LU NL SE					
W: CH DE ES GB JP					
EP 473727	A	19920311	(199211)		28
R: CH DE ES FR GB IT LU					
JP 05509236	W	19931222	(199405)		8
EP 473727	A4	19920520	(199522)		
EP 473727	B1	19951220	(199604)	EN	16
R: CH DE ES FR GB IT LI					
DE 69024351	E	19960201	(199610)		

Searcher : Shears 308-4994

09/510937

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4955899	A	US 1989-358787	19890526
EP 473727	A	EP 1990-909982	19900525
JP 05509236	W	JP 1990-509216	19900525
		WO 1990-US2970	19900525
EP 473727	A4	EP 1990-909982	
EP 473727	B1	EP 1990-909982	19900525
		WO 1990-US2970	19900525
DE 69024351	E	DE 1990-624351	19900525
		EP 1990-909982	19900525
		WO 1990-US2970	19900525

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 05509236	W Based on	WO 9014055
EP 473727	B1 Based on	WO 9014055
DE 69024351	E Based on	EP 473727
	Based on	WO 9014055

PRIORITY APPLN. INFO: US 1989-358787 19890526

AN 1990-297347 [39] WPIDS

AB US 4955899 A UPAB: 19950524

Longitudinally compliant vascular graft is a length of **porous PTFE** taping of which at least a portion has been compressed along a longitudinal axis and provided with a coating of biocompatible plastic, at least along the compressed portion. The elastomer can be non-**porous** and can be silicone-rubber, segmented polyurethane, polyurethane-urea or silicone-polyurethane copolymers. The taping is pref. compressed by pulling it over a cylindrical mandrel of like dia. an applying a compression force along its longitudinal axis.

ADVANTAGE - The graft allows stretching the longitudinally and minimising suture hole heeding at the ends of the graft. The stretchability makes sizing of the graft less critical and permits greater freedom of movement. @ (11pp Dwg.No.3/11)@
3/11

ABEQ EP 473727 B UPAB: 19960129

A longitudinally compliant vascular graft (20) comprising a length of **porous PTFE tubing** (32) having a micro-structure with nodes interconnected by **fibrils**, and **porous PTFE tubing** being adapted to be stretched along a central longitudinal axis (22) of the **PTFE tubing** and including an outer cylindrical wall coated with a biocompatible elastomer characterised in that at least a portion of

Searcher : Shears 308-4994

the **PTFE tubing** has been compressed along the central longitudinal axis (22) thereof following the prodn. of the **PTFE tubing** and the elastomer coating has been applied at least over the compressed portions of the graft in their compressed state, the compressed portion of the **PTFE tubing** coated by the biocompatible elastomer being adapted to be stretched along the central longitudinal axis (22) of the **PTFE tubing**.

Dwg.1/11

L33 ANSWER 44 OF 66 MEDLINE

ACCESSION NUMBER: 90299698 MEDLINE

DOCUMENT NUMBER: 90299698

TITLE: O2 transfer kinetics in a whole blood unicellular thin layer.

AUTHOR: Heidelberger E; Reeves R B

CORPORATE SOURCE: Department of Physiology, School of Medicine, State University of New York, Buffalo 14214.

CONTRACT NUMBER: PO1-HL-28542 (NHLBI)

SOURCE: JOURNAL OF APPLIED PHYSIOLOGY, (1990 May) 68 (5) 1854-64.

Journal code: HEG. ISSN: 8750-7587.

PUB. COUNTRY: United States

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199010

AB A planar monocellular layer of whole blood (WB) sandwiched between two Gore-Tex membranes is used to study O2 uptake and release kinetics at 37 degrees C. Gore-Tex, a highly gas-permeable open mesh of Teflon **fibrils** (78% **porosity**, 0.2-microns pore size, 75-microns thick), constrains WB to form a thin film without imposing an appreciable gas diffusion barrier. WB layer thickness, measured by isotope dilution, is 1.7 +/- 0.2 microns. WB films are mounted between fiber optics in a gas flow **tube** for dual-wavelength (536/558 nm) oxyhemoglobin saturation measurements after a step change in PO2. For isocapnic (6% CO2) step changes in PO2 between 0 and 104 Torr, WB O2 uptake half time is 10.4 +/- 0.9 ms; WB O2 release half time is 20.6 +/- 2.4 ms. Half-time values are half of those previously reported. The thin-layer method reduces erythrocyte diffusion boundary layer error and thereby offers an attractive alternative to classical rapid fluid-mixing techniques.

L33 ANSWER 45 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1990-006967 [01] WPIDS

CROSS REFERENCE: 1988-154435 [22]

DOC. NO. CPI: C1990-002944

TITLE: Extrusion and expansion of **PTFE**

Searcher : Shears 308-4994

09/510937

tubing - using reciprocating ram to force
material between helically grooved die and mandrel.
DERWENT CLASS: A14 A32 D22
INVENTOR(S): BIGGERSTAF, C E; CAMPBELL, M L; RIFFLE, R G; .
WILLIAMS, B G
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 4876051	A	19891024	(199001)*		12

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4876051	A	US 1987-134045	19871217

PRIORITY APPLN. INFO: US 1986-930411 19861113; US 1987-134045
19871217

AN 1990-006967 [01] WPIDS

CR 1988-154435 [22]

AB US 4876051 A UPAB: 19950404

Preformed billet of a mixt. of a coagulated dispersion of **PTFE** and liq. lubricant is extruded through a hollow cylindrical barrel contg. a mandrel by a ram to a die having a tip of the mandrel positioned concentrically therein, with at least one of the confronting surfaces of the die and tip being provided with a helical groove. The unsintered **tubing** exiting the die and having at least one helical groove on its surface, has lubricant removed from its surface and is expanded by longitudinal stretching at a temp. between 35 deg.C, and the crystalline melting point of the **PTFE**.

USE/ADVANTAGE - In prodn. of **PTFE tubing**, partic. for use in the medical field. Provides a **tube** of highly crystalline **PTFE** with a microstructure having elongate nodes interconnected by fine **fibrils** with the node longitudinal axes at 15 to 80 deg. to the longitudinal axes of the **tube** providing a high strength.

0/10

Dwg.0/10

ABEQ DE 3778831 G UPAB: 19930928

Extruded and expanded **porous tube** consisting essentially of **polytetrafluoroethylene (PTFE)** has a microstructure characterised by elongated nodes interconnected by fine **fibrils**. Each node has a longitudinal and transverse axis. Substantially all of the longitudinal axes are

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oriented between 85 and 15 deg. with respect to the longitudinal axis of the **tube** at at least one radial position.

USE/ADVANTAGE - **Tube** of invention is partic. suitable for use in the medical field, e.g. as artificial vascular graft. **Tube** has increased strength compared to conventionally extruded and expanded **tubes** because of the orientation of the nodes in its microstructure produced as a result of the orientation of the nodes in its microstructure produced as a result of helically oriented grooves in the extrusion tip and/or extrusion die.

L33 ANSWER 46 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1989-081693 [11] WPIDS
DOC. NO. CPI: C1989-036363
TITLE: Heated **tubular** filter element - comprises filter membrane with **porous** support on both sides and end caps sealed with reinforced ends.
DERWENT CLASS: A18 A88 J01
PATENT ASSIGNEE(S): (KURB) KURABO IND LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 01034403	A	19890203	(198911)*		7
JP 2507456	B2	19960612	(199628)		5

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 01034403	A	JP 1987-189859	19870728
JP 2507456	B2	JP 1987-189859	19870728

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 2507456	B2 Previous Publ.	JP 01034403

PRIORITY APPLN. INFO: JP 1987-189859 19870728

AN 1989-081693 [11] WPIDS

AB JP 01034403 A UPAB: 19970502

Pleated **tubular** filter element comprises a membrane filter with **porous** support on both sides of the membrane, and end-caps, which are sealed tightly on both ends of the membrane filter. Both ends are reinforced with thermoplastic reinforcing material by binding on at least one side. The membrane filter is

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pref. made from **PTFE** or polyvinylidene fluoride. The **thickness** of the membrane filter is pref. 30-200 microns. The thermoplastic reinforcing material is pref. made from PP or PF. The thermoplastic reinforcing material is pref. film, net or nonwoven fabric, pref. in the form of a ribbon or tape having 5-100 microns **thickness**. The reinforcing material has 1-20 **mm** width. The **porous** supporting material is pref. net, woven fabric or nonwoven fabric and is made from PP or PE.

USE/ADVANTAGE - The filter element is used for precision filtration.

In an example, PP film (40 microns **thickness**, 5 **mm** width) is laminated with both ends of **PTFE** membrane filter (60 microns **thickness**, 245 **mm** width and 360 cm length). Nonwoven fabric made from PP (0.2 **mm thickness**, 40 g/m2) is **layered** on both sides of the membrane filter, as a sandwich, and pleated 150 times. The both ends of the pleat-sheet is sealed with an impulse sealer to form a **tube**. The **tubular** pleated-sheet is set between a **porous** cylindrical core made from PP (41 **mm** outer dia., 34 **mm** inner dia., 245 **mm** length) and a **porous** cylinder made from PP (70 **mm** outer dia., 66 **mm** inner dia., 245 **mm** length), and the ends of these are sealed with end caps made from pp with melted PP.
Dwg.0/8

L33 ANSWER 47 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 ACCESSION NUMBER: 1989-124114 [17] WPIDS
 DOC. NO. CPI: C1989-055009
 TITLE: Rapid recoverable **porous poly tetra fluoroethylene** - has microstructure of nodes interconnected by **fibrils**.
 DERWENT CLASS: A14 A35
 INVENTOR(S): HOUSE, W; MYERS, D J; HOUSE, W D
 PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
 COUNTRY COUNT: 11
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 313263	A	19890426	(198917)*	EN	14
AU 8822922	A	19890420	(198923)		
NO 8804629	A	19890516	(198925)		
DK 8805817	A	19890420	(198926)		
GB 2211190	A	19890628	(198926)		
FI 8804830	A	19890420	(198931)		
PT 88796	A	19890731	(198935)		
US 4877661	A	19891031	(199002)		10
Searcher				:	Shears 308-4994

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JP 02000645	A	19900105	(199007)		
CN 1034889	A	19890823	(199027)		
US 5026513	A	19910625	(199128)		
EP 313263	B1	19930324	(199312)	EN	21
DE 3879613	G	19930429	(199318)		
CA 1318093	C	19930525	(199326)		
US 5308664	A	19940503	(199417)		12
JP 2547243	B2	19961023	(199647)		8

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 313263	A	EP 1988-309542	19881012
GB 2211190	A	GB 1988-23934	19881012
US 4877661	A	US 1987-110145	19871019
JP 02000645	A	JP 1988-260731	19881018
US 5026513	A	US 1989-355236	19890522
EP 313263	B1	EP 1988-309542	19881012
DE 3879613	G	DE 1988-3879613	19881012
		EP 1988-309542	19881012
CA 1318093	C	CA 1988-580425	19881018
US 5308664	A CIP of	US 1987-110145	19871019
		US 1988-248887	19880923
JP 2547243	B2	JP 1988-260731	19881018

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 3879613	G Based on	EP 313263
US 5308664	A CIP of	US 4877661
JP 2547243	B2 Previous Publ.	JP 02000645

PRIORITY APPLN. INFO: US 1987-110145 19871019; US 1988-248887
19880923

AN 1989-124114 [17] WPIDS

AB EP 313263 A UPAB: 19930923

A **porous** shaped article consisting essentially of **polytetrafluoroethylene (PTFE)** has a microstructure of nodes interconnected by **fibrils** pref. all of which have a bent appearance, pref. with a V/H ratio of at least 0.15 and has a rapid recovery of more than about 5.5NoAbstract.

An extruded, expanded article, heat treated above its crystalline m.pt., is made of a material consisting of **PTFE**, the **porous PTFE** having been subsequently compressed at least 50NoAbstract (pref. at least 60NoAbstract, or 75NoAbstract, or 90NoAbstract) in the direction rapid recoverable

Searcher : Shears 308-4994

characteristics are desired, restrained and heated.

Making rapidly recoverable **PTFE** material comprises extruding a preformed billet of a mixt. of coagulated dispersion of **PTFE** and liq. lubricant, expanding said material, after removal of liq. lubricant, by stretching it longitudinally and maintaining it at between 35 deg.C and the crystalline m.pt. during stretching, compressing the extruded and expanded **PTFE** in the direction of **fibrils** to reduce its size, restraining said **PTFE** in its compressed state, and opt. heating said compressed **PTFE** (pref. to above its crystalline m.pt.).

ADVANTAGE - These **PTFE tubes** have improved bending characteristics over previous **porous PTFE tubes**, and improved resistance to kinking, constriction or collapse under flexure. They are partic. suitable for use in the medical field, but are also useful in other areas such as filtration and fabric applications.

0/13

ABEQ EP 313263 B UPAB: 19930923

A **porous** shaped article consisting essentially of **polytetrafluoroethylene** (PFTE), said article having a microstructure of nodes interconnected by **fibrils**, characterised in that said article is capable of being stretched and then rapidly recovering more than about 5.5% of its stretched length.

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ABEQ US 4877661 A UPAB: 19930923

Porous shaped article mainly comprises **PTFE**, and has a microstructure of nodes interconnected by **fibrils**. Article can be stretched then rapidly recovers more than 6% of its stretched length.

Pref. all the **fibrils** have a bent appearance. Article is **tube** shaped having smooth inside and outside surfaces, which can be slit longitudinally and opened to form a sheet. Opt. article comprises a rod, film, or filament, and can have corrugated surfaces.

USE - As vascular grafts or as filters or fabrics.

ABEQ US 5026513 A UPAB: 19930923

A process for making rapid recoverable **polytetrafluoroethylene** (**PTFE**) material with a microstructure of nodes and **fibrils** is new. The process comprises of 5 stages (a)-(e). (a) is extruding a preformed billet of a mixture of coagulated dispersion of **PTFE** and liquid lubricant. (b) is expanding **PTFE** after removal of liquid lubricant by stretching it longitudinally and maintaining it at a temp. of 35 deg.C. and the crystalline melt pt. during stretching. (c) is compressing extruded and expanded **PTFE** in the direction of the **fibrils** to reduce its size. (d) is restraining **PTFE** in its compressed state. (e) is heating compressed **PTFE**.

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USE/ADVANTAGE - Articles made from these materials are esp. suitable for use in medical fields as well as filtration and fabric applications.

ABEQ US 5308664 A UPAB: 19940613

A **porous** shaped **PTFE** article has a microstructure of nodes interconnected by **fibrils**. All the **fibrils** are bent and have a vertical displacement:internodal distance ratio of at least 0.15, pref. at least 2.0. At ambient temp. the article can rapidly recover after stretching more than 6.0% of its stretched length.

The article is made e.g. by compressing a **PTFE** article, which has been expanded by stretching and heated to above its m.pt. parallel to but opposite the stretching direction, then restraining the article and heating to above the crystalline m.pt., allowing to cool, removing the restraint and restretching in the direction of original stretch to the original length.

USE/ADVANTAGE - Used as replacement blood vessels, patches, sutures or ligaments or as a filter or in waterproof clothing. The method provides improved properties.

Dwg.2/13

L33 ANSWER 48 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1988-154435 [22] WPIDS

CROSS REFERENCE: 1990-006967 [01]

TITLE: Extruded and expanded **poly tetra fluoroethylene tubing** - in which **fibril** interconnected nodes have defined orientations for greater strength.

DERWENT CLASS: A14 A96 D22 P32 Q67

INVENTOR(S): BIGGERSTAFF, C E; CAMPBELL, M L; RIFFLE, R G; WILLIAMS, B G; BIGGERSTAF, C E

PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L

COUNTRY COUNT: 20

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 4743480	A	19880510	(198822)*		11
GB 2197870	A	19880602	(198822)		
AU 8774176	A	19880519	(198828)		
JP 63139926	A	19880611	(198829)		
EP 267719	A	19880518	(198830)	EN	
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
DK 8705900	A	19880514	(198912)		
AU 9056829	A	19900927	(199046)		
EP 267719	B	19920506	(199219)	EN	21
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
DE 3778831	G	19920611	(199225)		
CA 1311590	C	19921222	(199305)		

Searcher : Shears 308-4994

JP 07015022 B2 19950222 (199512) 11

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4743480	A	US 1986-930411	19861113
GB 2197870	A	GB 1987-25612	19871102
JP 63139926	A	JP 1987-198364	19870810
EP 267719	A	EP 1987-309673	19871102
EP 267719	B	EP 1987-309673	19871102
DE 3778831	G	DE 1987-3778831	19871102
		EP 1987-309673	19871102
CA 1311590	C	CA 1987-547153	19870917
JP 07015022	B2	JP 1987-198364	19870810

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 3778831	G Based on	EP 267719
JP 07015022	B2 Based on	JP 63139926

PRIORITY APPLN. INFO: US 1986-930411 19861113; US 1987-134045
19871217

AN 1988-154435 [22] WPIDS

CR 1990-006967 [01]

AB US 4743480 A UPAB: 19950404

Extruded and expanded **porous tube** consisting essentially of **polytetrafluoroethylene (PTFE)** has a microstructure characterised by elongated nodes interconnected by fine **fibrils**. Each node has a longitudinal and transverse axis. Substantially all of the longitudinal axes are oriented between 85 and 15 deg. with respect to the longitudinal axis of the **tube** at at least one radial position.

USE/ADVANTAGE - **Tube** of invention is partic. suitable for use in the medical field, e.g. as artificial vascular graft. **Tube** has increased strength compared to conventionally extruded and expanded **tubes** because of the orientation of the nodes in its microstructure produced as a result of the orientation of the nodes in its microstructure produced as a result of helically oriented grooves in the extrusion tip and/or extrusion die.

0/9

Dwg.0/9

ABEQ DE 3778831 G UPAB: 19930923

Extruded and expanded **porous tube** consisting essentially of **polytetrafluoroethylene (PTFE)** has a microstructure characterised by elongated nodes interconnected

Searcher : Shears 308-4994

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by fine **fibrils**. Each node has a longitudinal and transverse axis. Substantially all of the longitudinal axes are oriented between 85 and 15 deg. with respect to the longitudinal axis of the **tube** at at least one radial position.

USE/ADVANTAGE - **Tube** of invention is partic. suitable for use in the medical field, e.g. as artificial vascular graft. **Tube** has increased strength compared to conventionally extruded and expanded **tubes** because of the orientation of the nodes in its microstructure produced as a result of the orientation of the nodes in its microstructure produced as a result of helically oriented grooves in the extrusion tip and/or extrusion die.

ABEQ EP 267719 B UPAB: 19930923

An extruded and expanded **tube** of a porous material consisting essentially of **polytetrafluoroethylene (PTFE)** said **tube** having a longitudinal axis and **tube** wall which **PTFE** material has a microstructure consisting of elongated nodes, each node having a longitudinal axis and a transverse axis, which nodes are interconnected by fine **fibrils**, characterised by substantially all of the longitudinal axes of said nodes at at least one radial position within said **tube** wall being oriented at an angle between 85 degrees and 15 degrees with respect to said longitudinal axis of said **tube**.

L33 ANSWER 49 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1988-287878 [41] WPIDS

DOC. NO. NON-CPI: N1988-218459

DOC. NO. CPI: C1988-127711

TITLE: Vitreous body prosthesis - is thin-walled inflatable **balloon** with **tube** to control degree of inflation.

DERWENT CLASS: A96 D22 'P32 P34

PATENT ASSIGNEE(S): (JOSE-I) JOSEPH N H

COUNTRY COUNT: 3

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2203048	A	19881012	(198841)*		16
DE 3809820	A	19881103	(198845)		
US 4902292	A	19900220	(199014)		7
GB 2203048	B	19901205	(199049)		
DE 3809820	C	19920213	(199207)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

Searcher		:	Shears 308-4994

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GB 2203048	A	GB 1988-6924	19880323
DE 3809820	A	DE 1988-3809820	19880323
US 4902292	A	US 1988-167352	19880314

PRIORITY APPLN. INFO: GB 1987-7503 19870330; GB 1988-6924
19880323

AN 1988-287878 [41] WPIDS

AB GB 2203048 A UPAB: 19930923

A prosthesis comprises a **thin-walled** inflatable **balloon** of biocompatible material which can be stabilised and fixed within an eye, and a **tube** communicating with the **balloon** for introducing or removing fluid to control the degree of inflation. **Balloon** and **tube** are pref. of silicone rubber.

The **balloon** pref. has an inflated diameter of 24 mm and a thin elastic posterior part for apposition to the retina and with a thickness of 0.06 mm. The **balloon** pref. has a reinforced anterior part 0.5 mm thick and supporting a polymethylmethacrylate or silicone rubber lens with indentations to facilitate manipulation by instruments.

ADVANTAGE - Can perform the retinal hole closing functions of the vitreous body after this has been removed during retinal reattachment surgery.

0/2

ABEQ DE 3809820 C UPAB: 19930923

A prosthetic eye glass arrangement includes a **thin walled**, expandable **balloon** made of a biocompatible material, and a material for stabilising and fixing the **balloon** inside the eye. A bio-compatible material **tube** is connected to the inside of the **balloon**, so that liq. can be supplied or removed. The **balloon** inflation can be controlled. The lens section pref. consists of polymethyl methacrylate or silicone rubber.

ADVANTAGE - The arrangement closes off retina openings and is safe and reliable.

ABEQ GB 2203048 B UPAB: 19930923

A vitreous body prosthesis device comprising a **thin-walled** inflatable **balloon** made of bio-compatible material, means for stabilising and fixing the **balloon** within an eye, an inflow **tube** made of bio-compatible material and in fluid-tight communication with the interior of the **balloon**, and means for introducing fluid into the inflow **tube**, or for removing fluid from the inflow **tube**, whereby the degree of inflation of the **balloon** can be controlled.

ABEQ US 4902292 A UPAB: 19930923

A vitreous body prosthesis comprises a **thin-walled** inflatable spherical **balloon** (14) with posterior part for

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apposition to the retina and securable in the vitreous cavity of the eye. The **balloon** can be inflated controllably via a **tube** (17), pref. connected to an extra-orbital s.c. thick-walled silicone rubber injection bulb (19).

Balloon and **tube** are pref. of silicone rubber, and the **balloon** anterior part is thicker, is reinforced with embedded **tubular** elements, fibres or **porous** materials such as open-cell silicone rubber foam, expanded **PTFE** foam or inert woven or nonwoven material. The anterior part pref. supports a silicone rubber or polymethylmethacrylate lens (12).

ADVANTAGE - Can carry out the retinal hole closing functions of an ocular vitreous body after this has been removed during retinal re-attachment surgery.

L33 ANSWER 50 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1988-015429 [03] WPIDS

DOC. NO. NON-CPI: N1988-011566

DOC. NO. CPI: C1988-006656

TITLE: Endoscope disinfection - facilitated by
porous inner guide **tube** and outer
closed-cell guide **tube**.

DERWENT CLASS: A96 P31

INVENTOR(S): AOSHIRO, H

PATENT ASSIGNEE(S): (MACH-N) MACHIDA SEISAKUSHO KK

COUNTRY COUNT: 3

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 3722116	A	19880114	(198803)*		13
US 4771766	A	19880920	(198840)		12
JP 63015935	A	19880123	(199024)		
JP 63054143	A	19880308	(199024)		
DE 3722116	C	19910411	(199115)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 3722116	A	DE 1987-3722116	19870703
US 4771766	A	US 1987-64224	19870619

PRIORITY APPLN. INFO: JP 1986-158843 19860708; JP 1986-197393
19860825

AN 1988-015429 [03] WPIDS

AB DE 3722116 A UPAB: 19930923

Endoscope includes a guide **tube** assembly which must have a
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low coefficient of friction so that the instruments are easy to insert and to extract. It includes an inner **tube** which is made of a **porous** resin, pref. **PTFE** and communicates at one end with a proximal opening and at its other end with the distal opening. The outer **tubes** is made of a closed-cell resin, or of **thin-walled** rubber. The hollow space in the inner **tube** is connected through the pores in the wall to the annulus. A fluid can be passed to this annulus through an opening in the proximal component.

ADVANTAGE - This makes it possible to disinfect and to wash the inner **tube** reliably and actively.

0/8

ABEQ DE 3722116 C UPAB: 19930923

The endoscope has a proximal portion with control (10) and opening (27a), and from which an oblong inserted portion (11) extends to the distal end (13), also with an opening (13a').

A guide **tube** assembly (20) passes through the inserted portion and has an inner **tube** (21) of **porous** resin connected between the openings, also an outer one (22) enclosing the inner one and of impermeable resin. A portion (21a) of the inner **tube** is connected by its pores to the annular space (23) between it and the outer **tube**.

Inlet and outlet ports (31a) in the proximal portion and the distal end of the inserted portion lead to the annular chamber, and a fluid can be passed through them.

ADVANTAGE - Allows safe disinfection and washing of inner **tube**.

ABEQ US 4771766 A UPAB: 19930923

An endoscope comprises a proximal body with an opening, an inserting element extending from the body having a distal end opening and a guide **tube** extending through the element. The guide **tube** comprises an inner **tube** of **porous** resin in communication with the two openings and an outer **tube** formed of imperforate resin surrounding it.

The inner **tube** has a hollow portion in communication with the annular between the **tubes** by means of pores with its wall. The annular region is in fluid flow with the proximal body or the distal end of the inserting element for supply of disinfecting fluid.

ADVANTAGE - Washing and disinfecting of the scope is possible in a reliable and positive manner.

L33 ANSWER 51 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1987-229482 [33] WPIDS

DOC. NO. NON-CPI: N1987-171786

DOC. NO. CPI: C1987-096725

TITLE: Fibrous **PTFE** **tubes** for prostheses - oriented axially at the inner surface and circumferentially at the outer surface.

Searcher : Shears 308-4994

09/510937

DERWENT CLASS: A14 A96 D22 P32 P34
INVENTOR(S): ASAKO, S; OKIT, A K
PATENT ASSIGNEE(S): (SUME) SUMITOMO ELECTRIC IND CO
COUNTRY COUNT: 4
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 232543	A	19870819	(198733)*	EN	12
R: DE FR GB					
JP 62152470	A	19870707	(199030)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 232543	A	EP 1986-118024	19861223

PRIORITY APPLN. INFO: JP 1985-296494 19851224

AN 1987-229482 [33] WPIDS

AB EP 232543 A UPAB: 19930922

Tubular, internal organ prosthetic, fibrous **PTFE** comprises knots coupled with **fibrils** having (i) a mean **fibril** length at the outside surface at least 5 times that of the inner surface and (ii) a mean knot thickness at the outer surface at least 10 times that of the inner surface, and with a continuously varying fibrous constitution from the axially oriented inner to the circumferentially oriented outer surface.

Pref. the fibrous outer surface forms 50-90% of the wall thickness; the mean **fibril** length of the inner surface is 10-100 microns, and of the outer surface, 50-500 microns; the mean knot thickness of the inner surface is 0.5-5 microns and of the outer surface, 20-200 microns, approx. 40 times greater than the mean knot thickness of the inner surface.

USE/ADVANTAGE - The **porous** prosthetic material is useful for prodn. of soft thrombus-free artificial blood vessels, and also as an artificial oesophagus, trachea, bile duct, ureter etc., which do not damage surrounding tissues and are tear resistant when sutured. The **tubing** resists buckling when bent, and the differences in mean **fibril** length between outer and inner surfaces promote the penetration of the surrounding tissue into the prosthetic material.

0/0

L33 ANSWER 52 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1986-277418 [42] WPIDS

DOC. NO. CPI: C1986-120021

TITLE: Destruction of stable foams along **pipes** -

Searcher : Shears 308-4994

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by installing in **pipe porous layer of poly tetra fluoroethylene** through which foam passes and is deaerated.

DERWENT CLASS: A88 J01
INVENTOR(S): GONCHAROV, V N; PAKKI, V I
PATENT ASSIGNEE(S): (UNAT-R) UKR NATURAL GAS RES
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
SU 1214144	A	19860228	(198642)*		2

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
SU 1214144	A	SU 1984-3790798	19840917

PRIORITY APPLN. INFO: SU 1984-3790798 19840917

AN 1986-277418 [42] WPIDS

AB SU 1214144 A UPAB: 19930922

The foam is passed through a **layer** of fluorine-contg. polymer material, e.g. **porous polytetrafluoroethylene (PTFE)**. The passage is done at a pressure difference of above 0.1 MPa, and a linear velocity of the flow of foam=0.1-0.5 m/sec. The **porous layer of PTFE** has a pore diameter of 10-60 microns, the **thickness** of the **layer** being 10-30 mm.

USE/ADVANTAGE - Used in chemical technology to break down foams in sealed appts. The effectiveness of the destruction of the foam is increased.

0/0

L33 ANSWER 53 OF 66 MEDLINE

DUPLICATE 2

ACCESSION NUMBER: 86069995 MEDLINE

DOCUMENT NUMBER: 86069995

TITLE: Implantation failure of peritoneal dialysis catheters: a scanning electron microscopical study.

AUTHOR: Gregory D W; Youngson G G; Marshall D

SOURCE: SCANNING ELECTRON MICROSCOPY, (1985) (Pt 3) 1223-9.
Journal code: UCU. ISSN: 0586-5581.

PUB. COUNTRY: United States

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

Searcher : Shears 308-4994

09/510937

FILE SEGMENT: Priority Journals

ENTRY MONTH: 198603

AB Patients with end stage renal failure may be treated by continuous ambulatory peritoneal dialysis. The transcutaneous portion of the **catheters** used in this treatment is covered with **porous expanded polytetrafluoroethylene (PTFE)** to provide a surface suitable for tissue infiltration. Following some instances where **catheters** failed to become fixed in the abdominal wall, a scanning electron microscopical study was carried out to compare the infiltration of **catheters** having successful or unsuccessful implantation. The **porous** layer of a well-fixed **catheter**, removed after successful renal transplantation, was infiltrated with collagen **fibrils** and overlaid by layered connective tissue composed of fibroblasts and collagen fibre bundles, sometimes linking to surrounding muscle fibres. The examination of four unsuccessful **catheters** revealed no evidence for infection being the cause of implantation failure. However the **porous** surface of these **catheters** was filled with blood components and products, sometimes apparently laid down in layers, suggesting that frequent bleeding resulting from repeated trauma may be responsible for the failure of **catheter** fixation. These findings led to two changes in clinical practice with apparent patient benefit. The implantation site has been relocated to reduce chafing by clothing and the post-operative wound dressing technique has been altered to minimise **catheter** movement.

L33 ANSWER 54 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1984-256561 [41] WPIDS

DOC. NO. NON-CPI: N1984-191689

DOC. NO. CPI: C1984-108431

TITLE: Metallised microporous **PTFE** article -
made by electroless plating using soln.
displacement technique.

DERWENT CLASS: A88 J01 M13 P42 P73 Q67 V04 W02 X12 X16

INVENTOR(S): MANNISO, J L

PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L

COUNTRY COUNT: 16

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
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WO 8403645	A	19840927	(198441)*	EN	29
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RW: AT BE CH DE FR GB LU NL SE

W: JP

AU 8425877	A	19841122	(198503)		
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EP 142518	A	19850529	(198522)	EN	
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R: AT BE CH DE FR GB LI LU NL SE

ZA 8402018	A	19850318	(198527)		
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Searcher : Shears 308-4994

09/510937

JP 60500905 W 19850620 (198531)
US 4557957 A 19851210 (198601)
CA 1224092 A 19870714 (198732)
US 4720400 A 19880119 (198805)
EP 142518 B 19880518 (198820) EN
R: AT BE CH DE FR GB LI LU NL SE
DE 3471263 G 19880623 (198826)
JP 04064305 B 19921014 (199245) 11
JP 05269903 A 19931019 (199346) 10
JP 05269904 A 19931019 (199346) 10
JP 06059699 B2 19940810 (199430) 11
JP 06059700 B2 19940810 (199430) 11

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 8403645	A	WO 1984-US397	19840316
EP 142518	A	EP 1984-901511	19840316
ZA 8402018	A	ZA 1984-2018	19840319
JP 60500905	W	JP 1984-501386	19840316
US 4557957	A	US 1983-476839	19830318
US 4720400	A	US 1985-769774	19850828
JP 04064305	B	JP 1984-501386	19840316
		WO 1984-US397	19840316
JP 05269903	A Div ex	JP 1984-501386	19840316
		JP 1991-354284	19840316
JP 05269904	A Div ex	JP 1984-501386	19840316
		JP 1991-354285	19840316
JP 06059699	B2 Div ex	JP 1984-501386	19840316
		JP 1991-354284	19840316
JP 06059700	B2 Div ex	JP 1984-501386	19840316
		JP 1991-354285	19840316

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 04064305	B Based on	JP 60500905
	Based on	WO 8403645
JP 06059699	B2 Based on	JP 05269903
JP 06059700	B2 Based on	JP 05269904

PRIORITY APPLN. INFO: US 1983-476839 19830318; US 1985-769774
19850828

AN 1984-256561 [41] WPIDS

AB WO 8403645 A UPAB: 19930925

The effective pore size in a microporous PTFE article,
having a microstructure of nodes interconnected by fibrils

Searcher : Shears 308-4994

, is controllably reduced by encapsulating the individual nodes and **fibrils** with a metal coating.

A microporous **PTFE** substrate, having a microstructure of nodes interconnected with **fibrils**, is coated with a conductive metal, such that the coating surrounds at least some of the nodes and **fibrils**, the coated substrate is conductive along at least one surface and through at least part of the substrate volume beneath this surface, and the coated substrate retains at least some of its **porosity**, by (i) cleaning the substrate; (ii) saturating the substrate with an aq. surfactant soln; (iii) activating the substrate surfaces using a Pd/Sn activator soln., the final activating substep involving displacing the Sn portion of the activator soln. with an accelerator soln.; (iv) displacing the accelerator soln. using an aq. medium; and (v) electrolessly plating the substrate.

USE/ADVANTAGE - Possible applications of the prods. are as a cleanable precipitator collector plate; as an electrically conducting grounding and shielding material, for battery and fuel cell applications, etc. The prods. are microporous (15-0.01 micron pores), highly **porous** (98-50%), flexible, electrically conductive along their exterior surfaces and through their volume, hydrophilic and highly permeable and have an effective metal-coated surface area of greater than 1 sq.m/g and a metal coating which tenaciously encapsulates both exterior and interior surfaces without substantial **porosity** reduction.

0/4

ABEQ EP 142518 B UPAB: 19930925

1. A process for coating a microporous **polytetrafluoroethylene** substrate with a conductive metal which comprises the steps of ing the substrate and thereafter plating the substrate using an electroless plating solution such that the coated substrate retains at least some of its **porosity**, characterised by the intermediate steps of (1) saturating the membrane with an aqueous surfactant solution, (2) activating the surfaces of said substrate to be plated using a palladium/tin activator solution wherein the activating step includes as a final activating substep the tin portion of said activator solution with an accelerator solution and (3) displacing at least a portion of the accelerator using an aqueous medium, the substrate having a microstructure of nodes interconnected with **fibrils** and the plating being so carried out that conductive metal coating substantially surrounds at least some of the nodes and **fibrils**, and the coated substrate is conductive along at least one surface and through at least a portion of the substrate volume beneath the one surface.

ABEQ US 4557957 A UPAB: 19930925

A metal-coated article comprises a micro-porous **polytetrafluoroethylene tube** having a microstructure of nodes interconnected by **fibrils**. The

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metal coating encapsulates at least some of the individual nodes and **fibrils**. The **tube** has inner and outer surfaces, is flexible and is electrically conductive through at least a portion of the micro-porous structure while retaining **porosity**. Pref. the metal-coated surface area is microporous and hydrophilic and any nonmetal-coated vol. portion is hydrophobic. Pref. the metal is nickel, copper, silver, gold, platinum or rhodium.

USE - In industrial, medical and electrical arts e.g. in industrial filter bag filtration systems.

ABEQ US 4720400 A UPAB: 19930925

Microporous **polytetrafluoroethylene** substrate is coated with a conductive metal, where the substrate has a microstructure of nodes interconnected with **fibrils** by a method in which the substrate is cleaned by immersion in anhydrous acetone and saturated with an aq. soln. of surfactant with methanol and distilled water then is activated on the surfaces to be plated with a Pd/Sn activator soln., the Sn portion being displaced with an accelerator soln. of hydrochloric acid or ammonium hydroxide At least part of the accelerator is displaced with an aq. medium and the substrate is plated by an electroless method at controlled pH of about 7.2 and temp. of about 150 deg. F.

USE/ADVANTAGE - E.g., to give conductivity for electronic applications, adherent coatings being possible.

ABEQ JP 05269903 A UPAB: 19940103

ABEQ JP 05269904 A UPAB: 19940103

L33 ANSWER 55 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
DUPLICATE 3

ACCESSION NUMBER: 1982-78045E [37] WPIDS

TITLE: Degas stopper structure of mould - for foam moulding of urethane resin, consists of

PTFE porous non-fibril

material of specified thickness, air permeation resistance etc..

DERWENT CLASS: A14 A25 A32

PATENT ASSIGNEE(S): (MITF) MITSUI FLUOROCHEMICAL CO LTD

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 57128522	A	19820810	(198237)*		5
JP 02031658	B	19900716	(199032)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
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Searcher : Shears 308-4994

09/510937

JP 02031658 B

JP 1981-14428 19810204

PRIORITY APPLN. INFO: JP 1981-14428 19810204

AN 1982-78045E [37] WPIDS

AB JP 57128522 A UPAB: 19930915

Degas stopper structure comprises (a) **PTFE porous** substance of non-fibril structure which has a thickness of 0.5 mm. or more (esp. above 5 mm.), an apparent specific gravity (ASG) of 0.8-1.8, (esp. 1-1.6) and air permeation resistance (APR) of 0.1-2 (esp. 0.2-1). The porous substance is fixed at the position where the hollow part of a hollow-protecting tube is cut off.

Compared with metallic porous substance, the degas stopper structure has excellent degass performance for a long period. The degas stopper structure is easy to produce but does not have trace of degassing on the finished surface of the mould.

L33 ANSWER 56 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1981-55606D [31] WPIDS
TITLE: Hollow ceramic body prodn. - by thermal spraying ceramic onto internally cooled core.
DERWENT CLASS: A82 L02 P42 P43 P62 P64 Q67
INVENTOR(S): SCHULTZE, W; WEBER, K
PATENT ASSIGNEE(S): (LANG-N) LANGLET W KG; (VALC) VAW VER ALUMINIUM WERKE AG
COUNTRY COUNT: 8
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2067459	A	19810730	(198131)*		6
DE 3001371	A	19810806	(198133)		
FR 2473399	A	19810717	(198135)		
JP 56104010	A	19810819	(198140)		
GB 2067459	B	19830622	(198325)		
DE 3001371	C	19831027	(198344)		
CA 1160579	A	19840117	(198408)		
US 4460529	A	19840717	(198431)		
US 4547415	A	19851015	(198544)		
CH 651780	A	19851015	(198547)		
US 4657794	A	19870414	(198717)		
JP 63009964	B	19830303	(198813)		
IT 1147795	B	19861126	(198845)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

Searcher		:	Shears 308-4994

09/510937

JP 56104010	A	JP 1981-3300	19810114
US 4460529	A	US 1981-225191	19810115
US 4547415	A	US 1983-510876	19830927
US 4657794	A	US 1985-768612	19850823

PRIORITY APPLN. INFO: DE 1980-3001371 19800116

AN 1981-55606D [31] WPIDS

AB GB 2067459 A UPAB: 19930915

A ceramic or oxide ceramic hollow body (**tube**) is made by continuously thermally spraying (flame spraying) the binder free ceramic onto an internally cooled core. The sprayed body is then removed from the core which may be metallic, cardboard coated with glass fibre, wood or plastics. A **layer** of water glass, fluorocarbon/P.T.F.E. may be applied to the core before spraying.

Used for prodn. of **tubes** with a wall **thickness** greater than 5 mm suitable as a calcination **tube** for waste containers for radioactive and highly toxic materials, as fireproof lining or a thermally insulating **tube**. The ceramic body is homogeneous, stable at high temp. and can be sepd. easily from the core.

ABEQ US 4460529 A UPAB: 19930915

Ceramic or ceramic oxide hollow body is using a hollow core (5) of material with high thermal conductivity and expansion as compared to the body, with an outer surface non-adherent to the body and internal cooling. Non-aggregated atomised ceramic particles free of binder are flame sprayed through a hot plasma jet onto the core outer surface as a uniform coating while maintaining a given temp. gradient across the core wall.

Internal cooling of the core is continued and the coating is additionally cooled by a compressed gas jet (11) before separating body from core. The core surface is pref. of glass fibres, **PTFE** or heat-resistant textile tape, and the gas jet is of air, CO₂ or N₂. The core is pref. of Cu, Al, Al-mg or Al-Be. Body **layer thickness** is pref. 0.05-0.15mm and the temp. gradient is less than 2 deg. C/mm.

ADVANTAGE - Provides homogeneous microporous body with high heat stability and insensitivity to shock without using binder.

ABEQ US 4547415 A UPAB: 19930915

A hollow **tubular** body formed of fused **layers** of particles of ceramic/ceramic oxide particles esp. aluminium oxide, magnesium oxide and/or titanium oxide. The structure is free of binder, **porous** and has no adhering internal support. It is produced under conditions such that the internal temperature gradient does not exceed 2 deg. C/mm of **layer thickness**.

ADVANTAGE - The **tube** is homogeneous, heat stable and shock resistant. They are resistant to interlayer failure. They can be used e.g. as high temp. process **pipes**, insulation or as

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containers for toxic/radioactive materials.

ABEQ US 4657794 A UPAB: 19930915

Binder-less ceramic hollow body, e.g. for calcining pipes or for contg. toxic materials, comprises layers of fused particles selected from the gp. of ceramic and ceramic oxide particles, free from any binding agent. The body is porous and free from internal adhering supports. It is produced by exposing the layers to a temp. gradient not exceeding 2 deg. C per mm of layer thickness. Exterior wall thickness is greater than about 5 mm.

Pref. materials are at least one from the gp. carbides, borides, and nitrides of Al and Ti and Al or at least one from the gp. Mg, Ti oxides, the material being at least 99 wt.% or 99.5 wt.% pure respectively.

ADVANTAGE - Body is homogeneous, microporous, heat stable and shock insensitive.

L33 ANSWER 57 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1981-38532D [22] WPIDS
TITLE: Skinless sausages formed in reusable casing - of PTFE membrane in cylindrical housing with spring loaded end plugs.
DERWENT CLASS: A97 D12
INVENTOR(S): BECKER, H
PATENT ASSIGNEE(S): (ASHL-N) ASHLAND FOOD TECHNOLOGY HOLDING
COUNTRY COUNT: 17
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 28858	A	19810520	(198122)*	EN	
R: AT BE CH DE FR GB IT LI NL SE					
BR 8007280	A	19810519	(198123)		
NO 8003365	A	19810601	(198126)		
GB 2066037	A	19810708	(198128)		
FI 8003485	A	19810630	(198130)		
DK 8004737	A	19810824	(198138)		
DD 154189	A	19820303	(198231)		
US 4371554	A	19830201	(198307)		
EP 28858	B	19831012	(198342)	EN	
R: AT BE CH DE FR GB IT LI NL SE					
DE 3065314	G	19831117	(198347)		
US 4437206	A	19840320	(198414)		
JP 56092729	A	19810727	(198915)		
JP 01015251	B	19890316	(198915)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
		Searcher : Shears	308-4994

09/510937

US 4371554 A US 1982-428020 19820929
JP 56092729 A JP 1979-10067 19791109

PRIORITY APPLN. INFO: CH 1979-10067 19791109

AN 1981-38532D [22] WPIDS

AB EP 28858 A UPAB: 19930915

A reusable, **tubular** sausage casing includes a **PTFE** membrane mounted in a cylindrical support. The membrane has nodes interconnected by **fibrils** and has sufficient **porosity** to vent steam released during cooking the sausage meats. The surface texture prevents the extrusion of solids and provides for the easy release of the sausage product. The **PTFE** has the following characteristics: a Gurley number of 28 secs; a bubble point pressure of 0.91 to 1.55 kg/sq.cm; a water entry pressure of at least 2.8 kg/sq.cm.

The **PTFE** membrane is held by a ribbed housing. The ends of the membrane are captured by a screwed end cap. Pref. an end plug (11a) is advanced by a helical spring to compress the sausage mixture (10). Pref. the membrane is formed from flat **PTFE** tape wound helically with its overlapping edges adhered.

The casing is reusable and produces skinless sausages esp. parboil or raw sausages.

ABEQ US 4437206 A UPAB: 19930915

Sausage casing **PTFE** membrane has Gurley no. of 1-650 secs. (ASTM D-726-58) being the time to flow 100cm³ of air through specified test area; (2) Bubble point pressure of 3-60 psig visually determined using Mullins burst test appts. (Fed. Std 191, Method 5512) by raising water pressure to test level over 10 secs and keeping it there for 30 secs.; (4) thickness of 0.001-5 mm and (5) **porosity** of 30-90% defined as Q where SG is density of **PTFE**.

Appts. comprises means for supporting **tubular** casing, that includes a lattice structure of plural longitudinal and ring shaped cross ribs with means to secure casing ends.

Also claimed is a sausage casing with membrane thickness of 0.003 inches, **porosity** of 78%, density of 0.04 g/cm³, max Gurley No. of 28 seconds, bubble point pressure of min of 13 psig and max of 22 psig, min. water entry pressure of 40 psig and bubble point pressure test time of 120 secs for 500cm³ of methanol to pass through test area.

L33 ANSWER 58 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1981-46026D [26] WPIDS

TITLE: Fabrication of filters from microporous
 PTFE components - by welding and
 recrystallisation while clamped to inhibit thermal
 contraction.

Searcher : Shears 308-4994

11/01

09/510937

DERWENT CLASS: A14 A35 A88 J01 P32 P73
INVENTOR(S): BOWMAN, J B
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 17
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
BE 887501	A	19810601	(198126)	*	
GB 2068827	A	19810819	(198134)		
US 4283448	A	19810811	(198135)		
BR 8100852	A	19810825	(198138)		
FR 2475974	A	19810821	(198139)		
NO 8100506	A	19810907	(198140)		
SE 8100407	A	19810914	(198140)		
NL 8100672	A	19810916	(198142)		
FI 8100449	A	19810930	(198143)		
DK 8100635	A	19811012	(198145)		
DE 3104037	A	19811224	(198201)		
JP 57046835	A	19820317	(198217)		
ZA 8100678	A	19820126	(198217)		
GB 2068827	B	19830921	(198338)		
CA 1165080	A	19840410	(198419)		
DE 3153148	A	19840517	(198421)		
DE 3153179	A	19841115	(198447)		
DE 3153231	A	19850131	(198506)		
CH 652072	A	19851031	(198547)		
DE 3104037	C	19860227	(198610)		
SE 448968	B	19870330	(198715)		
DE 3153231	C	19870521	(198720)		
IT 1135417	B	19860820	(198805)		
AT 8100711	A	19880115	(198808)		
JP 63015904	B	19880406	(198817)		
NL 185906	B	19900316	(199013)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
NL 8100672	A	NL 1981-672	19810212
DE 3104037	A	DE 1981-3153148	19810205
JP 57046835	A	JP 1981-19161	19810213
DE 3153148	A	DE 1981-3153179	19810205
DE 3153179	A	DE 1981-3153231	19810205
DE 3153231	A	DE 1981-3104037	19810205

PRIORITY APPLN. INFO: US 1980-121365 19800214
AN 1981-46026D [26] WPIDS
Searcher : Shears 308-4994

AB BE 887501 A UPAB: 19930915

PTFE articles are fabricated from smaller component parts by (a) clamping the interfaces together whilst (b) clamping the components to inhibit thermal contraction whilst (c) the components are heated and maintained for a period at a temp. above their crystalline m.pt. and then (d) cooled to below the crystalline m.pt. while maintaining the interface in close contact.

Esp. suitable for fabricating complex industrial or surgical filters from pieces of **porous PTFE** 0.13-2.54 mm. thick and having a microstructure of crystalline nodules linked by **fibrils**, so as to establish a similar structure across the fused interface, and to inhibit densification of the bulk structure due to thermal contraction.

Segments of a **tubular** filter may be assembled circumferentially and concentrically around a mandral of suitable dia. and clamped at each end to inhibit longitudinal contraction. The segments may be overwrapped with helically wound oriented **PTFE** tape which, by thermal contraction, will maintain the segment interfaces in compression while the components are annealed and then allowed to recrystallise.

ABEQ DE 3104037 C UPAB: 19930915

Prod'n. of **tubes** from stretched, **porous polytetrafluoroethylene** comprises extrusion around a spike to obtain a succession of **tubular** segments; the segments are wrapped with stretched, **porous PTFE** foil having a fibrille-bonded, nodular microstructure, then laid horizontally and heated above the crystalline m.p. under pressure, when the foil shrinks and bonds to the surface of the **tubes**; and the **tubes** are cooled.

ADVANTAGE - The prods. have excellent thermal and chemical stability, electrical resistance, non-adhesive and self-lubricating properties, for medical and industrial applications.

ABEQ DE 3153231 C UPAB: 19930915

Sections of stretched, shrinkable microporous **polytetrafluoroethylene**, each having a microstructure comprising nodules, bonded by **fibrils**, are bonded by keeping the sections in contact during the bonding.

It is heated to a temp. above the crystalline m.pt. for a predetermined time and then cooled below the crystalline m.pt. The contacting edges of the sections, are held by force perpendicular to the edges, during the heating- and cooling processes, to inhibit shrinkage of the sections.

ADVANTAGE - On bonding microporous **PTFE**, the original microstructure of nodules and **fibrils** is retained a little changed as possible.

L33 ANSWER 59 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1980-12798C [07] WPIDS

TITLE: **PTFE** polymer with high **porosity**

Searcher : . Shears 308-4994

09/510937

and tensile strength - useful as insulator in cable
and gas permeable membrane.

DERWENT CLASS: A41 A85 A88 F01 X12
INVENTOR(S): GORE, R W
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

US 4187390	A	19800205	(198007)	*	

PRIORITY APPLN. INFO: US 1970-39753 19700521; US 1973-376188
19730703; US 1975-637298 19751203; US
1977-808545 19770621

AN 1980-12798C [07] WPIDS
AB US 4187390 A UPAB: 19930902

A **porous** material comprises a highly crystalline
PTFE polymer which has a microstructure characterised by
nodes interconnected by **fibrils**. The material has a
matrix tensile strength in at least one direction of >9290 psi.

Claimed embodiments include (a) material which has been heated
to >327 degrees C, has a crystallinity <95%, a thermal conductivity
of 0.17-0.85 Btu/hr/sq. ft./degree F/in a dielectric constant of
1.2-1.8 and an N2 permeability of 10-8-10-1 metric units (b)
material which has not been heated to >327 degrees C and has a
crystallinity >95%, (c) material which has been expanded by
stretching at >=10%/sec., and maintained at 35 degrees C to the
crystalline melting point during the stretching so that the final
length is >2x(>24x) the original length.

The material is used to form films, **tubes**, continuous
filaments and rods which may be fitted, compressed or impregnated,
and in laminates. Claimed uses for the material is as an insulator
in a coaxial cable, where its reduced dielectric constant yields
smaller and lighter cables, and a laminate membrane which is
permeable to gas but not to water. By suitable treatment, a matrix
tensile strength >100,000 psi and **porosity** <97(40-75)% can
be obtd.

L33 ANSWER 60 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1980-33244C [19] WPIDS

TITLE: Flexible **catheter** or cannula **tube**
- of sintered **PTFE** with alternating
porous and solid wall sections.

DERWENT CLASS: A96 B07 Q67
PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L; (JUNS) JUNKOSHA CO LTD
COUNTRY COUNT: 2

Searcher : Shears 308-4994

09/510937

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 1567122	A	19800508	(198019)*		
JP 53122287	A	19781025	(199101)		

PRIORITY APPLN. INFO: JP 1977-36711 19770331; JP 1977-39910U
19770331

AN 1980-33244C [19] WPIDS

AB GB 1567122 A UPAB: 19930902

A flexible **tubular** instrument comprises a sintered **PTFE tube** with solid and **porous** wall sections alternating along its length. The tip is pref. **porous** and the **porous** sections microstructure consists of nodes connected by **fibrils**.

The solid and **porous** sections may alternate spirally along the **tube**, or a single **porous** section may separate two solid sections. The **tube** is readily insertable and removable, can be made free from kinking and provided with a required balance of rigidity and flexibility and can withstand sterilisation.

L33 ANSWER 61 OF 66 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

ACCESSION NUMBER: 80166035 EMBASE

DOCUMENT NUMBER: 1980166035

TITLE: The Castelli membrane in the treatment of glue ear.

AUTHOR: Bailey Q.

CORPORATE SOURCE: Dept. Otolaryngol., Univ. Melbourne, Roy. Victorian Eye Ear Hosp., East Melbourne, Vict., Australia

SOURCE: Journal of Laryngology and Otology, (1980) 94/4 (377-382).

CODEN: JLOTAX

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal

FILE SEGMENT: 011 Otorhinolaryngology

LANGUAGE: English

AB Since the introduction by Armstrong in 1954 of middle ear drain **tubes** (tympanostomy **tubes**, MEDTs) for the treatment of serous otitis media, an ever-increasing number of operations to insert these devices has been performed. Many varied designs of MEDT are in use and they are manufactured from Polyethylene, Teflon, Silicone and stainless steel. All conventional MEDTs aim to aerate the middle ear, and in doing so they convert the tympanum from a closed ventilated cavity into an open one. They share the disadvantage that water should be prevented from entering the middle ear during swimming and other activities. The ideal MEDT

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should, among other features, provide continuous middle ear aeration whilst in position but should prevent the entry of water or other material into the middle ear. Attempts to provide this include the use of semi-permeable membranes, and such devices include the Castelli membrane, a **porous** structure of expanded **polytetrafluoroethylene** (Teflon) consisting of a matrix of nodules interconnected with **fibrils** between which are open pore spaces with a characteristic pore size of 0.20 microns which is bonded to the external flange of the MEDT. This paper summarized experience with Castelli membrane **tubes** gained over a two-year period.

L33 ANSWER 62 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1979-81118B [45] WPIDS
TITLE: Supported catalyst for hydrogen isotope concn. -
has **porous ptfе** support mixed
with fluorocarbon or (co)polystyrene to increase
surface area.
DERWENT CLASS: A18 A97 E36 J01 K08
INVENTOR(S): ISOMURA, S; NAKANE, R; WAKO, S
PATENT ASSIGNEE(S): (RIKA) RIKAGAKU KENKYUSHO; (SUME) SUMITOMO ELEC IND
LTD
COUNTRY COUNT: 5
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2917234	A	19791031	(197945)*		
JP 54143786	A	19791109	(197951)		
JP 54143789	A	19791109	(197951)		
FR 2427296	A	19800201	(198011)		
US 4259209	A	19810331	(198116)		
DE 2917234	B	19810716	(198130)		
CA 1123416	A	19820511	(198222)		
JP 57045614	B	19820929	(198242)		
JP 57045615	B	19820929	(198242)		

PRIORITY APPLN. INFO: JP 1978-52051 19780428; JP 1978-52054
19780428

AN 1979-81118B [45] WPIDS

AB DE 2917234 A UPAB: 19930901

Catalyst for the concn. of hydrogen isotopes by exchange between gaseous hydrogen and liquid water has a support of **porous PTFE** with a total specific surface area of 2-80 m²/g resulting from mixing with 0.5-15 wt.% fluorocarbon (I) or a **porous** styrene polymer (IIA) or styrene divinylbenzene copolymer (IIB) with a specific surface area of min. 50 m²/g.

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Particles of gp. VIII element(s) are deposited on the support.

(I) is pref. the fluoride (IA) of amorphous carbon, (II) is rendered hydrophobic. The **PTFE** has a **porosity** of 50-90% and is in the form of rings cut from a **tube**. The average pore dia. is 0.5-2 μ m. The **PTFE** pref. has a fibrous structure with knots of interconnected **fibrils**, which are surrounded by (II) or to which (II) is fixed.

A considerable increase in the catalytic activity is obtd. with this support.

L33 ANSWER 63 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 ACCESSION NUMBER: 1978-46285A [26] WPIDS
 TITLE: Electrode for electrochemical measurement using half cell - is prepd. by forming holes on metal or resin support lateral surface, coating with polyfluorocarbon resin and attaching glass electrode.
 DERWENT CLASS: A89 J04 S03
 PATENT ASSIGNEE(S): (DENK-N) DENKI KAGAKU KEIKI KK; (SUME) SUMITOMO ELECTRIC IND CO
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 53054089	A	19780517	(197826)*		

PRIORITY APPLN. INFO: JP 1976-128944 19761026

AN 1978-46285A [26] WPIDS

AB JP 53054089 A UPAB: 19930901

An electrode for electrochemical measurement using half-cell is prepd. by forming a number of holes having a dia. of 0.1-2.0 mm. on lateral surface of metallic or synthetic-resinous supporting body and coating an external surface of the supporting body with a fluorine resin filter and connecting a stem **tube** of a glass electrode and a guard by upper and lower screws. The holes are passages in which an internal soln. flows out to the outside through the fluorine resin filter. The supporting body is fitted to reinforcing, protecting the fluorine resin filter, i.e. the liquid circuit. An internal surface of the fluorine resin filter is plated with a silver chloride **layer** and it may be used as an internal electrode.

The fluorine resin is **PTFE**, polychlorotrifluoroethylene, copolymer of TFE-hexafluoroethylene and polydichlorofluoroethylene. It has a **porous** dia. of 0.005-1.0 μ , an aerial **porosity** of 2-50% and a **thickness** of 0.05-3 mm. as a means of flowing out

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a sample soln. contg. ions.

The electrode for electrochemical measurement is used for measuring an ion potential of the sample soln.

L33 ANSWER 64 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1978-04665A [03] WPIDS
TITLE: Flexible **tube** of extreme suppleness - has
a waterproof layer sandwiched between layers of
porous plastic of special microstructure.
DERWENT CLASS: A88 Q67
PATENT ASSIGNEE(S): (JUNS) JUNKOSHA CO LTD; (OLYU) OLYMPUS OPTICAL CO
LTD
COUNTRY COUNT: 2
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2728636	A	19780105	(197803)*		
DE 2728636	C	19820826	(198235)		
JP 53000422	A	19780106	(198501)		
JP 59049464	B	19841202	(198501)		

PRIORITY APPLN. INFO: JP 1976-74288 19760625

AN 1978-04665A [03] WPIDS

AB DE 2728636 A UPAB: 19930901

Tube consists of three layers. The inner layer is of a **porous** polymer with a microstructure of nodes joined by **fibrils**. Over this is wound a waterproof layer, and over that a further layer of the **porous** polymer.

Pref. the layers are connected together by adhesive and the **porous** polymer is **PTFE** or polypropylene. The middle, waterproof layer is pref. of a flexible plastic, partic. tetrafluorethylene-hexafluoropropylene copolymer a fluorhydrocarbon polymer with perfluoralkoxy side chains, a fluorelastomer or a plastic-backed metal foil.

Tubes can be bent to a radius of only 5-15 times their own dia. without kinking or collapsing. They bend easily and remain watertight after repeated bending.

L33 ANSWER 65 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1975-40996W [25] WPIDS
CROSS REFERENCE: 1979-53015B [29]
TITLE: Vascular prosthesis made of low density
PTFE - as a clot resistant replacement for
lesser blood vessels.
DERWENT CLASS: A14 A96 B07 D22 P32 P33
PATENT ASSIGNEE(S): (GOLD-I) GOLDFARB D
Searcher : Shears 308-4994

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COUNTRY COUNT: 8

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
BE 824943	A	19750515	(197525)*		
DE 2514231	A	19760506	(197620)		
NL 7503089	A	19760427	(197620)		
SE 7415996	A	19760524	(197624)		
FR 2288510	A	19760625	(197634)		
CH 587652	A	19770513	(197727)		
GB 1505591	A	19780330	(197813)		
IT 1026441	B	19780920	(197849)		

PRIORITY APPLN. INFO: US 1974-517415 19741024

AN 1975-40996W [25] WPIDS

CR 1979-53015B [29]

AB BE 824943 A UPAB: 19930831

Prosthetic **tubing** with a skin 0.2-0.8 mm thick and a come comprises an agglomerate of **PTFE** particles interstitial **fibrils** having an average apparent density of 0.2-0.5 g/ml and a **porosity** which will pass red corpuscles but not a clot. The surface must be suitable for supporting a neo-intima membrane and linking two living organs. The **tubing** is used esp. for replacing veins or arteries of <8 mm, pref. 2-6 mm bore, though is also suitable for blood vessels of up to 40 mm bore. The **tube** can be readily made in lengths and dias. suitable for replacing minor blood vessels in one piece, minimising the operating period necessary. It is readily made with a tapered profile for linking relatively large and small vessels, viz 5-8 mm dia., reducing to 2-6 mm. It is **porous** and acts as a filter, it also suppresses turbulent flow which might otherwise initiate clotting.

L33 ANSWER 66 OF 66 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1971-74957S [47] WPIDS

TITLE: **Porous polytetrafluoroethylene** material.

DERWENT CLASS: A14 A32 A94 P54 P73

PATENT ASSIGNEE(S): (GORE) GORE & ASSOC INC W L

COUNTRY COUNT: 9

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
BE 767423	A		(197147)*		
DE 2123316	A		(197149)		

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NL 7107000	A	(197149)
JP 46007284	A	(197202)
ZA 7103287	A	(197206)
FR 2090775	A	(197214)
GB 1355373	A	19740605 (197423)
CH 555377	A	19741031 (197446)
CA 962021	A	19750204 (197508)
DE 2123316	B	19750731 (197532)
JP 50138387	A	19751104 (197601)
JP 51030277	A	19760315 (197618)
JP 51018991	B	19760614 (197628)
NL 158729	B	19781215 (197902)
JP 55026567	B	19800714 (198032)
JP 56017216	B	19810421 (198120)
DE 2167294	B	19821223 (198301)

PRIORITY APPLN. INFO: US 1970-39753 19700521; US 1973-369814
19730614; US 1973-376188 19730703; US
1977-808545 19770621

AN 1971-74957S [47] WPIDS

AB BE 767423 A UPAB: 19930831

A porous material prepared from PTFE contains 5% of amorphous material and has a microstructure containing nodes joined by fibrils.

Articles are formed from a polymer paste by expansion and drawing, they are heated to at least 327 degrees C and held in the drawn state until they are cold. Although temp. as low as 35 degrees C may be used, max. improvement in properties is obtained by heating at 350 degrees-370 degrees C. A rate of expansion >10% per second is desirable and max. porosity is achieved at expansion ratios as high as 1500%. The fibrils have a diameter of 5 1000 angstroms and the nodes a length of 0.5-400 mu. Tubes, films and filaments may be formed and the materials may be impregnated and laminated. The expanded material generally has a porosity of 40-97%.

Articles of the material have high porosity and greatly augmented tensile strength, and may be used as filters, semipermeable membranes, thermal and electrical insulators.

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